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FISHERIES AND AQUACULTURE IN GEORGIA – CURRENT STATUS AND PLANNING

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FISHERIES AND AQUACULTURE IN GEORGIA – CURRENT STATUS AND PLANNING

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Preparation of this document

This document contains the Review of the Current Status of Fisheries Resources and Utilization in Georgia, the Master Plan for Fishery Sector Development in Georgia (2005–2020), the Action Plan for Fishery Sector Management and Development in Georgia (2005–2008), the final draft version of the Law of Georgia for Fisheries and Aquaculture and the summary report of the three national workshops organized under FAO project TCP/GEO/2904(A) – "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation".

The Review of the Current Status of Fisheries Resources and Utilization in Georgia was prepared by Dr Raymon van Anrooy and Dr Andrés Mena Millar of the Food and Agriculture Organization of the United Nations (FAO) with support from Mr Irakli Kacharava and Ms Maia Metreveli (national consultants) and Dr Akaki Komakhidze and Ms Maia Shavlakadze of the Marine Ecology and Fisheries Research Institute (MEFRI). Logistical and operational support in the collection of information was received from Mr Zviad Tsertsvadze, National Project Coordinator for TCP/GEO/2904(A) and staff member of the Department of Fisheries of Georgia.

The Master Plan for Fishery Sector Development in Georgia (2005 - 2020) and the Action Plan for Fishery Sector Management and Development in Georgia (2005–2008) were prepared by staff of the Department of Fisheries of the Ministry of Agriculture of Georgia with technical support from Dr Raymon van Anrooy and Dr Andrés Mena Millar (FAO). The two plans were the subject of an intensive process of consultation with all relevant fishery sector stakeholders and were submitted by the Minister of Agriculture to Parliament for approval. Consequently, the plans should be considered a framework of policy guidance, prepared with inputs from national workshops held in Batumi on 19 August 2004 and in Tbilisi on 11 and 18 February 2005. Finalization of the Master Plan took place in Tbilisi from 15 to16 June 2005 at a large stakeholder conference. Additional observations on the drafts were received from relevant officials and experts involved in fisheries management and development in Georgia and from ministries and institutions with a stake in fisheries and/or aquaculture in the country.

The technical work on the Law of Georgia for Fisheries and Aquaculture was led by Mr Melvin Spreij (FAO legal consultant), with support from Ms Maia Bitadze (national legal consultant) and Mr Blaise Kuemlangan and Ms Anniken Skonhoft (FAO legal officers). The law formulation process included consultations with high government officials, focusing mainly on the issue of the institutional structure for fisheries management, and consultations with technical government staff and officials, fishers' associations, non-governmental organizations (NGOs) and the private sector, focusing on the legal issues related to fisheries management. The legislative proposals were also discussed in the various workshops organized by the FAO TCP/GEO/2904(A) project.

The final section of this Fisheries Circular, presenting the summary report of the workshops organized under TCP/GEO/2904(A) was prepared by Dr Andrés Mena Millar (FAO) with technical inputs from Ms Anniken Skonhoft and Dr Raymon van Anrooy.

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The authors particularly acknowledge the contributions to the success of the project by Dr David Iakobidze (Director of the Department of Fisheries of Georgia), Ms Maia Metrevelli, Mr Irakli Kacharava, Mr Zviad Tsertsvadze, Ms Maia Bitadze, Mr Irakli Todria and Ms Sofia Lejava (TCP/GEO/2904(A) project staff), Dr Akaki Komakhidze and Ms Maia Shavlakadze (MEFRI), Mr Blaise Kuemlangan and Ms Anniken Skonhoft (FAO legal officers). Editorial work on this document by Ms Roberta Mitchell (FAO consultant) is also much appreciated.

Last, but not least, we would like to thank the workshop and conference participants for their important contributions to the drafting process of the Master Plan, Action Plan and Law and their active participation in various working groups.

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Abstract

In 2003 the Government of Georgia requested the Food and Agriculture Organization of the United Nations (FAO) to provide technical assistance for the sustainable development and management of the fishery sector in the country. FAO, through its Technical Cooperation Programme (TCP), approved project TCP/GEO/2904(A), entitled: "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation".

The aim of this Fisheries Circular is first to inform those interested in fisheries and aquaculture in Georgia about the current situation with regard to fishery resources and their utilization in the country. Second, it attempts to provide an example of a consultative and participative policy and legal framework development process. The approach used in the preparation of the Master Plan for Fishery Sector Development in Georgia (2005–2020), the Action Plan for Fishery Sector Management and Development in Georgia (2005–2008), and the Law of Georgia for Fisheries and Aquaculture could also be applicable in other countries in transition that have a relatively small fishery sector.

The documents presented here are considered as final versions and cleared as such by the Department of Fisheries (DoF) of the Ministry of Agriculture of Georgia. All the documents are also available in the Georgian language from the DoF in Tbilisi. At the time of publication, the DoF is steering the approval process of the Master Plan, Action Plan and Law within the Government of Georgia and has already started to implement the Action Plan.

The Review of the Current Status of Fisheries Resources and Utilization in Georgia is presented in the first part of this Fisheries Circular. The second part contains the final version of the Master Plan for Fishery Sector Development in Georgia, 2005–2020, while the third part provides the Action Plan for Fishery Sector Management and Development in Georgia, 2005–2008. The final draft version of the Law of Georgia for Fisheries and Aquaculture is presented in the fourth part. The last part contains a summary report of the proceedings and recommendations of the Workshop on Fisheries Management and Development (Batumi, 19 August 2004), the Workshop on Fisheries Legislation and Management, (Tbilisi, 11 and 18 February 2005), and the National Conference on Fisheries Management and Development in Georgia (Tbilisi, 15–16 June 2005).

Keywords
Fishery sector review, Fisheries Master Plan, Fisheries Action Plan, Fisheries Law, Aquaculture, Institutional strengthening, Georgia, Caucasus.

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REVIEW OF THE CURRENT STATUS OF FISHERIES RESOURCES AND UTILIZATION IN GEORGIA

Preparation of this document

This report presents the findings of a review study of the current status of fisheries resources and utilization in Georgia. The study was undertaken at the request of the Ministry of Agriculture of Georgia and forms part of the activities carried out under the Ministry of Agriculture/FAO project TCP/GEO/2904 (A) "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation".

The review study started with the collection of secondary information by Mr Irakli Kacharava and Ms Maia Metreveli (national consultants). Following the desk study, primary data were collected by the national consultants in close cooperation with Dr Akaki Komakhidze and Ms Maia Shavlakadze of the Marine Ecology and Fisheries Research Institute (MEFRI). They received logistical and operational support from Mr Zviad Tsertsvadze, National Project Coordinator of TCP/GEO/2904 (A) and staff member of the Department of Fisheries. A draft report was prepared and discussed among experts at national level. Their comments and observations were taken into account in the finalization of the report. Dr Raymon van Anrooy and Dr Andres Mena Millar of the Food and Agriculture Organization of the United Nations (FAO) coordinated the research and prepared the final version of the report. Dr Constantine Stamatopolous and Dr Melvin Spreij of FAO provided their technical inputs on statistical and legal issues, respectively.

The report is intended to provide the necessary background information on marine and inland capture fisheries, aquaculture and post-harvest activities for the preparation of the Master Plan for Fishery Sector Development in Georgia, 2005–2020. In particular, the diagnosis of the current situation – for which the report makes use of a strengths, weaknesses, opportunities and threats analysis (SWOT) – is essential in the participatory formulation process of the Master Plan.

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Foreword

The Ministry of Agriculture of Georgia is pleased to present you with the first review of the current status of fisheries resources and utilization in Georgia since the independence of the country in 1991. The fact that no comprehensive information about the situation in the Georgian fishery sector has been available to both those working in the sector and those interested in the sectoral development was a reason in itself to produce this review. Another reason was that governmental priorities are changing. The Government of Georgia sees opportunities for the fishery sector to contribute more to the national economic growth, poverty alleviation and the achievement of food security than it does now. Ongoing work on the Master Plan for Fishery Sector Development in Georgia, 2005–2020, called for a detailed diagnosis of the situation. The present review can be regarded as a baseline study of the fishery sector against which the performance of the sector can be assessed in the coming years.

The sustainable development of the fishery sector in Georgia calls for increased collaboration among fishers, aquaculturists, administrators, entrepreneurs, researchers, donors and other stakeholders. The rapidly changing international environment, including the changes in the markets for fish and fishery products, also makes it important for Georgia to work in close collaboration with other countries. Collaboration with regional fishery bodies, international centres of excellence in fisheries and with fish marketing and trade organizations is essential.

The review shows that Georgia has many constraints to overcome in order to achieve sustainable development in the fishery sector in the future, yet the challenges ahead will be rewarding and I can assure you that the Ministry of Agriculture is committed to play its part in the development process of the sector.

I would like to take this opportunity to thank the staff of our Department of Fisheries, the Food and Agriculture Organization of the United Nations (FAO) and the Georgian Marine Ecology and Fisheries Research Institute (MEFRI) for their assistance in producing this review.

The future, I believe, looks bright for the fishery sector of Georgia.

Minister of Agriculture

Mikhail Svimonishvili

Executive summary

Georgia is rich in hydrobiological resources. The Black Sea and the numerous rivers, reservoirs and lakes make the country suitable for marine and inland capture fisheries and aquaculture activities. The abundance of pelagic species such as anchovy and sprats in the Black Sea exclusive economic zone (EEZ) of Georgia provides good opportunities for marine fisheries development. In 2003 total catches of anchovy in the Georgian EEZ reached 12 200 tonnes while total marine catch in the same area was estimated at 14 450 tonnes. As the total catch in 2001 and 2002 was much lower, at 9 300 and 7 770 tonnes respectively, it appears that the marine capture sector is developing rapidly. It should be noted however that more than one-third of the total catch in 2003 was achieved by foreign fleets from Ukraine and Turkey. Compared with these two countries the catch in the Black Sea in recent years by the Georgian fleet is of limited importance.

Georgia's marine fishing fleet is small. It consists of 36 medium-sized seiners (110–225 HP) which were all constructed during the Soviet period. No significant modernization of the fleet has taken place since independence in 1991 and many of the vessels are in a bad condition because of lack of funds for maintenance and repair. There are also an estimated 324 small-scale fishing vessels involved in coastal capture fishery activities; these are equipped with seine nets, gillnets, bottom lines, cast nets and fishing rods.

The catch in inland waters in 2004 increased slightly compared with 2003. In 2003 inland capture fisheries production was estimated at 388 tonnes, which increased in 2004 to around 400 tonnes. The productivity of most of the lakes and reservoirs is poor, since many of these have not been restocked with fingerlings over the last decade. Nevertheless, some lakes provide favourable conditions for increasing the production of trout and carp in particular. The area of the ponds, lakes and reservoirs currently being restocked by six hatcheries and 81 farms with fingerlings is estimated to be in the order of 3 200 ha. Total culture-based capture fisheries production may reach up to 1 000 tonnes of fish annually (among which an estimated 600 tonnes of common carp and 250 tonnes of grass carp). Total production of the 35 identified trout farms in the country was estimated at 120 tonnes in 2003, showing little signs of an increase in 2004. Aquaculture and culture-based capture fisheries production is constrained by lack of good-quality feed and fingerlings.

In recent years the fishery products processing plants located in Tbilisi, Kutaisi, Batumi, Sukhumi and Gagra have not been operational. In 2004, only two fishmeal plants and a number of small-scale artisanal workshops for curing fish were operational in Tbilisi and other cities. The marketing of fish on the domestic market takes place mainly through some specialized fish markets in Batumi, Poti, Ureki and Mattakva and large food markets in the capital and other main cities. Supermarkets increase the diversity of fishery products for sale with a large variety of imported products, since there is consumer demand for value-added products that are not currently being produced in Georgia.

The volume of imports of fishery products in 1999 was 4 180 tonnes. This volume decreased considerably in 2000 and 2001 to just over 2 500 tonnes and increased again to almost 4 840 tonnes in 2003. Imports of fishery products in terms of value have increased steadily over the last few years, from US$1.1 million in 1999 to US$2 million in 2003. Over the last decade imports of fishery products by Georgia have always been higher than exports, but this has changed in recent years. In 2001 and 2003 exports in terms of volume

were higher than imports. This is largely caused by the fact that Ukrainian and Turkish fleets catch anchovy in Georgian waters and land the fish in Turkey and in Ukraine. The catch of these fleets is thus registered as exports.

It is estimated that present consumption of fishery products is less than 2 kg (live weight equivalent) per capita per year. By comparison, during the 1980s the average per capita consumption of fishery products was stable at around 19 kg. Demand for fishery (including aquaculture) products is high, and is estimated to be even higher than the consumption levels of the 1980s; however, market supply of fish is limited and prices and quality do not correspond with demand. Total employment in the fishery sector was estimated at 3 200 persons in 2004. The majority work in coastal small-scale fishing activities. Fishery sector research, education, training and extension are all currently being undertaken at very low levels. There is no education or specific training programme for capture fisheries and aquaculture. Fisheries research is only kept going by funds from foreign donors.

Georgia has ratified a number of international agreements on fisheries in the last decade. However, the lack of a fishery law, policy and planning has made it impossible to follow up on these agreements. In 2004 efforts were initiated to fill these gaps and the draft new fishery law and the present Master Plan are two examples of the Government's willingness to comply with international laws and agreements.

Improvements in the collection and analysis of fishery statistics are currently being made by the Department of Fisheries and it is thus expected that the quality of fishery statistics will increase considerably over the next few years. Access to formal credit and investment sources for fishery and aquaculture entrepreneurs is lacking at present. No financial institution is willing or in a position to provide the credit services that are required for the sustainable development of the fishery sector.

International assistance to development in the Georgian fishery sector has been limited over the last decade since the Government did not prioritize the sector. It is hoped that this situation will change with the approval of the legal and policy framework for fisheries, including the new fishery law and the Master Plan. These will help bilateral and international donor agencies to identify the assistance needs of the sector.

1. Introduction

This report aims to provide an overview of the current status of fisheries resources and utilization in Georgia together with a diagnosis of the situation. The desk study and fact-finding field visits that were carried out to produce this extensive report were requested by the Ministry of Agriculture (MoA) of Georgia.

While capture fisheries production in Georgia decreased rapidly from the early 1990s, world capture fisheries production increased, although with some fluctuation, up to 2000. The world catch in 2003 was estimated at about 91 million tonnes, while the catch by the Georgian fleet was estimated at 9.8 thousand tonnes. World fisheries production decreased by 1 percent from 2002 to 2003, since the increase in aquaculture production did not fully compensate for the decrease in marine capture fisheries production. Inland capture fisheries production in Georgia was estimated at 400 tonnes in 2004, while world inland capture fisheries production added up to about 9 million tonnes in recent years.

Total global aquaculture production increased from 2002 to 2003 from 2.1 to 41.9 million tonnes (FAO, 2004). Georgian aquaculture production also showed a slight increase and is this year (2005) estimated at 1 000 tonnes.

In 2002 the total value of world trade in fish and fishery products increased to US$58.2 billion, representing a 5 percent increase compared with 2000, although the total quantity of fish and fishery products traded remained stagnant in recent years (FAO, 2004). Georgian trade in fish and fishery products also increased – imports of fishery products were valued at US$2 million in 2003, while exports of fish and fishery products were valued at US$348 000 in the same year.

Globally, the share of fish used for non-food purposes is declining while per capita fish consumption shows an increasing trend. In 2003 the per capita food fish supply was 16.3 kg (world average), while in Georgia per capita fish consumption has been estimated at between 2 and 7 kg during the last few years.

In this report a historical background is first provided (Chapter 2), and the situation since 2001 is then discussed (Chapter 3). Chapter 3 starts with an overview of the natural resources and fishery sector potential in Georgia, followed by a description of the situation in the subsectors of marine and inland capture fisheries and aquaculture. The situation in facilitating industries and in fish processing, marketing and trade is also detailed. Other issues addressed in the chapter are the demand for fish; fishery sector employment; fisheries administration; training and research; policy and regulatory frameworks; fishery statistics; credit and investment issues; and international assistance in fishery sector development. The final chapter includes a diagnosis of the situation, using a SWOT analysis.

2. Historical background

This chapter provides some background information on fisheries development in Georgia up to 2000. The chapter is divided into two parts: the period before independence and the period from independence in 1991 until 2000. The situation from 2001 onwards is described in Chapter 3.

2.1 FISHERIES AND AQUACULTURE IN GEORGIA UP TO 1990

Fisheries in Georgia have a long history. The ancient Greek historian Herodotus and the geographer Strabone noted that fishing was the main activity of the Georgian tribes living in the coastal areas of the Black Sea (Elanidze, 1983). Visitors to the country were amazed by its gold, timber, honey and sturgeons. The sturgeon, standing out from all other fish for its taste and fatness, was not harvested in the Mediterranean (Zaitsev, 1996) but originated from the Black Sea.

Historical documents relate that sturgeon catches were considerable in Georgia in the nineteenth century. In the 1880s some 660 tonnes of sturgeon were caught in the River Rioni and slightly fewer in the Inguri and Khobi rivers. During the same period, catches of mullet and other fish species in Lake Paliastomi came to over 20 000 pounds (9 071.85 kg) annually (Gudimovich and Vakhvakhishvili, 1952). Based upon export data from 1901 to 1913, Gudimovich and Vakhvakhishvili estimated that average annual marine fish catches were around 5 700 tonnes of fish at that time. They estimated that some 2 260 tonnes were landed in Batumi, and 3 040 and 400 tonnes in Sukhumi and Poti, respectively. They also mentioned that local fish consumption had not been included in these estimates.

1930–1950

The development of the Georgian fishery industry started formally in 1930 with the establishment of the joint-stock company Saktevzi. In the early 1930s fish processing plants were built in Batumi, Poti, Sukhumi and Gagra. In the same cities fish processing shops were opened and in Poti in 1960 the Ocean Fishing Department was founded.

Fisheries production over the period 1930–1950 varied between 2 300 and 7 600 tonnes. Less than 6 percent of the total catch originated from inland waters (Tbackuri, Paravani and Jandjari lakes, Mtkvari and Khrami rivers). Table 1 details the catches of some of the main marine fish species over the period 1930–1990 and total inland and marine capture fisheries production in 1980–1990.

In the period 1930–1950 the commercially valuable and targeted fish species were anchovy (*Engraulis encrasicolus*), scad (*Trachurus trachurus ponticus*), turbot (*Psetta maeotica*), five species of mullet (Mugilidae), Black Sea shad (*Alosa Kesslery pontica*) and Kerch shad (*Caspialosa maeotica*), Azov and Paliastomi shads (*Caspialosa tanaica, Caspialosa paleastomi*), five species of sturgeon (Acipenseridae), Black Sea salmon (*Salmo trutta labrax*) and spiny dogfish (*Squalus acanthias*) (Gudimovich and Vakhvakhishvili, 1952). Other aquatic catches targeted in the same period were oysters, rapana and three species of dolphins.

TABLE 1
Fisheries production (*tonnes*) **in Georgia in selected years**

	1930	1950	1980	1990
Anchovy	1 595	5 219	110 000	4 656
Mullet	46	300	60	–
Red mullet	157	200	9	76
Scad	20	255	620	–
Sturgeon	87	61	–	–
Black Sea shad	40	55	–	–
Whiting	40	85	–	–
Turbot	13	52	–	19
Salmonidae	6	20	–	–
Spiny dogfish	–	–	700[2]	128
Others: garfish, mackerel, bonito	273[3]	71[4]	–	–
Marine fisheries production	–	–	111 389	4 879
Inland fisheries production	–	–	2 500	188
Total fish production	2 278	6 360	113 889[5]	5 067

[1] Salmon and sturgeon catches were not recorded in the 1980s and 1990s. Because of a decline in resources, fishing of these species was prohibited as far back as the 1960s, but poaching still took place; [2] Data from coastal fisheries only; [3] Including catches from Lake Paliastomi (connected to the sea by the River Kaparca). These catches varied between 54 and 187 tonnes over the period 1930–1950. Species caught were pikeperch, carp, catfish, bream and shad; [4] Idem; [5] Ocean catches of 1980 and 1990 were 98 000 and 99 654 tonnes, respectively. These were not included in the total catch figures given here.

Commonly used gears in the first half of the twentieth century were drag seines, "gir-giri" seines, fixed nets and fykes, baited hooks for catching sturgeon, and gillnets for catching turbot. Fishing activities were carried out from boats of limited tonnage using traditional technologies and mainly in near-shore areas. Typical vessel engine power was less than 25–30 HP.

Around 1945 the capture fisheries companies switched to purse seining when the main target species of the fisheries fleet became Black Sea anchovy. Scad and mullet were caught by small- and medium-sized seiners. Fisheries companies started to produce a variety of products, such as smoked, salted, frozen and canned anchovy; anchovy in tomato juice; and anchovy in oil (mainly salted). Value was also added to products such as scad, bonito, flounder, red mullet and mullet. Fishmeal was produced and some products were preserved in sodium pyrosulfate for animal feeding.

Like marine capture fisheries, aquaculture development in Georgia also started in the 1930s. From the beginning, aquaculture included fish culture activities in lakes, reservoirs, certain rivers (Alazani, Kura) and ponds. Aquaculture and inland fisheries activities were administered by GruzRybProm, which managed fish reproduction, growth and fish production issues. Some years later, the inland fisheries administration was separated from aquaculture and an independent institution, GruzRybKhoz, established.

In the period 1930–1950 there were some 50 aquaculture farms with a total pond surface area of 2.5 thousand ha in Georgia. Among these farms were two hatcheries in the western part of Georgia and three hatcheries in the eastern part. The hatcheries took care of the reproduction, grow-out and selection of various carp species. These were, among others,

common carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*), bighead carp (*Aristichthys nobilis*) and grass carp (*Ctenopharyngodon idella*).

With the aim of restocking natural inland waterbodies, GruzRybKhoz established six industrial trout farms (two in western Georgia and four in the eastern part). Rainbow trout (*Oncorhynchus mykiss*) were reproduced and grown on the Chernorechensk trout farm in the vicinity of Gudauta city and on the Akhaltsikhe trout farm. Annually, 3–5 million fingerlings were released to the wild and 250–270 tonnes of trout were grown for consumption. Between 1935 and 1974 (before the construction of the Kodori salmon plant), the Chernorechensk trout farm also reproduced Black Sea salmon.

1950–1970

There is little information available on fishery sector development in Georgia over the period 1950–1970. It is clear however that marine capture fisheries and aquaculture increased considerably over that period (Table 2).

TABLE 2
Fish production in different environments, 1950–1970

Fish production (*tonnes*)	1950	1960	1965	1970
Black Sea capture	6 250	5 730	16 690	34 400
Inland reservoir capture	70	140	160	140
Aquaculture	40	30	140	590
Total	**6 360**	**5 900**	**16 990**	**35 130**

In 1963 the State Fishery Industry Department of Georgia received the first "Atlantic"-type fishing trawler, the Shota Rustaveli which, in its first year of operation, caught 23 400 tonnes of high-quality fish in the Atlantic Ocean. In 1964–1965 the Department continued to construct the same type of trawls and in 1970 Georgia had a fleet of 16 long–distance industrial fishing trawlers. Most of the marine catches were thus realized in the Atlantic and Indian Oceans.

Fishing techniques and methods used in this period changed completely, as shown in Table 3. Although the data differ slightly from those presented in Table 2,[1] it is clear that the importance of passive fishing gears such as standing nets, fykes and fish traps decreased. At the same time, the Georgian fleet of small- and medium-sized trawlers, purse seiners, longliners and gillnetters increased and production achieved by these vessels became more significant.

TABLE 3
Marine capture production with active and passive gears in the Black Sea and Azov Sea, 1950–1970

Years	Total production (*tonnes*)	With			
		active gears		passive gears	
		(*tonnes*)	(%)	(*tonnes*)	(%)
1950	7 090	2 420	34.0	4 670	66.0
1960	6 630	6 110	92.1	520	7.9
1965	17 540	16 430	93.7	1 110	6.3
1970	35 610	24 290	96.3	1 320	3.7

[1] It is not clear which of the estimates given in Tables 2 and 3 is the most accurate.

As far as aquaculture production is concerned, it has been recorded that after the Second World War the ranching of Black Sea salmon continued in the Black Sea. Annually, 300 000–500 000 fingerlings were produced by the hatcheries for restocking (Barach, 1962). In the 1960s the production of fingerlings of this species decreased to 120 000–565 000 annually; this decrease continued in the 1970s to 100 000–120 000 fingerlings per year (Ivanov, Kosireva and Cirkova, 1976).

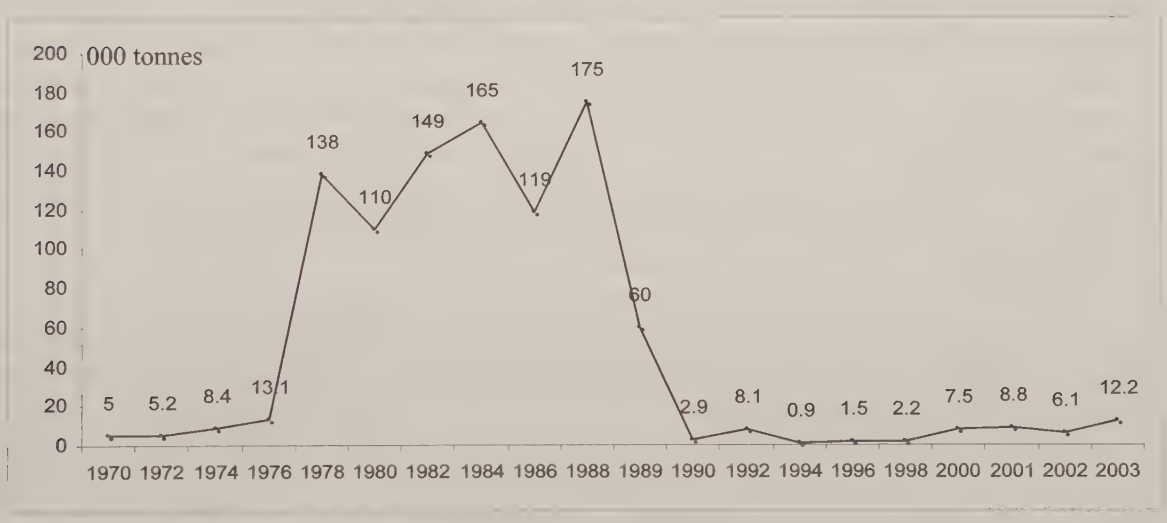
1970–1990

Over the period 1930–1990, the highest marine capture fisheries landings were recorded in 1980. In that year a total catch of 211 889 tonnes was recorded.

In Black Sea fish landing statistics, anchovy is the dominant species. It constitutes 30–40 percent of total coastal catches in Georgia. The average annual volume of anchovy caught in the 1980s was around 80 000 tonnes (Shlyakhov, Chaschin and Korkov, 1990). This volume decreased to between 2 000 and 7 000 tonnes in the 1990s (Shavlakadze, 1998). Because of the adoption in 1982 of the Law of the Sea and the establishment of 200-mile exclusive economic zones (EEZs) by many coastal states, the Government of the former Union of Soviet Socialist Republics (USSR) had to move a large part of its fishing fleet into its EEZ, including the Black Sea. Consequently, at one point, 220 seiners were involved in anchovy fishing near the Georgian coast.

In 1988/89 anchovy landings by seiners from Turkey and the former USSR reached their peak with a catch of 488 000 tonnes. Both stocks and catch of anchovy were reduced in the early 1990s. The estimated stock in Georgian coastal waters declined from approximately 550 000 to 270 000 tonnes and the catch from about 170 000 to less than 3 000 tonnes in 1991 (Figure 1).

FIGURE 1
Catches of anchovy in Georgian waters by national and foreign fleets, 1970–2003



In the period 1980–1990 the Georgian fishing fleet incorporated 48 industrial fishing vessels belonging to state companies or to fishing cooperatives. Ten of these vessels were trawlers with an engine power of up to 2 856 HP. They had a large capacity for ocean fishing and the necessary facilities on board to stay at sea for prolonged periods. Each ocean-going vessel caught and processed on board an average of 4 000 tonnes of fish per

year. Mediterranean scad (*Trachurus mediterraneus*), mackerel (*Scomber scombrus*), oil sardine (*Sardinella longiceps),* captain fish (*Pseudotolithus brachygnathus, Pseudotolithus senegalensis*) and bluefish (*Pomatomus saltator*) were some of the species that were landed frequently. Some industrial vessels looked like factories at sea and had processing and freezing facilities on board.

In addition to the industrial fishing fleet, Georgia also had an important small-scale coastal fishing fleet in the late 1980s. This fleet included three *motofelugas* or motorized wooden boats (engine power 14.6 HP) and 300 small-scale fishing boats (average engine power 3.65 HP). These boats used a variety of gears – among others, fixed nets, hooks for catching spiny dogfish and seines.

As an indication of the importance of the fishing industry for the coastal economy at that time, in 1980 the state fishing companies Adjartevzi, Potitevzi and Mebaduri employed 1 200, 1 000 and 254 people, respectively. Additionally, the Fisher's Trade Union had 947 members. The total number of people employed in marine capture fisheries in 1980 was estimated at around 3 400.

The number of people employed in these fisheries in Georgia decreased considerably in the 1980s to less than 1 800 in 1990. In 1990 the fleet of Potitevzi comprised 800 fishermen. Moreover, the Trade Union of Adjarian Industrial Fishermen and Fish Processors involved 300 fishers, and 124 fishermen were members of the Georgian Trade Union of Fishers, which included fishery enterprises in Poti, Batumi, Khobi, Gagra, Grigoleti and Sukhumi.

In the 1980s, aquaculture was considered a less important source of fish since marine production increased considerably. The number of aquaculture farms declined from the 1950s to the 1980s in particular, from around 50 to fewer than 20 farms. In the mid-1980s there were 13 fish farms in Georgia where mirror carp was cultivated in ponds. Only two fish farms were involved in rainbow trout culture. Fifteen reservoirs and 20 lakes with a total water surface of around 30 000 ha were used for the grow-out to market size of these freshwater fish (Elanidze, 1983). In the light of a huge programme of fish ranching in the former USSR, which aimed to increase the marine capture of sturgeon and salmon, the River Rioni sturgeon hatchery and River Kodori salmon hatchery were constructed in the late 1970s. These two state hatcheries released more than 2 million juvenile fish into the Black Sea over the period 1981–1991. In addition, a number of hatcheries were built in the 1980s for the restocking of inland waterbodies.

In 1980 the then Ministry of Agriculture and Food established the GruzSelRybKhoz fisheries agency, which was responsible for inland waterbodies (rivers, lakes and reservoirs) and artificial fish ponds, with a total surface area of 700–800 ha. Average annual inland capture fisheries and aquaculture production in the 1980s fluctuated widely, between 2 700 and 5 000 tonnes. Two-thirds of the production came from aquaculture and about one-third from culture-based inland capture fisheries.

Inland fisheries and aquaculture production in the 1980s was considerably higher than it is now. For example, Lake Tabatskuri produced between 60 and 100 tonnes annually, while currently only a production of 40 tonnes is reached; on the same lake, fisheries provided employment in the 1980s to around 40 persons but now to only eight. Similarly, annual production in Lake Paravani in the 1980s was almost 200 tonnes, compared with between

60 and 80 tonnes at present. At the end of the 1980s, the annual capture fisheries production in the Krami reservoir was estimated at 100 tonnes, while currently only 25 tonnes are being caught.

2.2 FISHERIES AND AQUACULTURE IN GEORGIA AFTER INDEPENDENCE

1991–2000

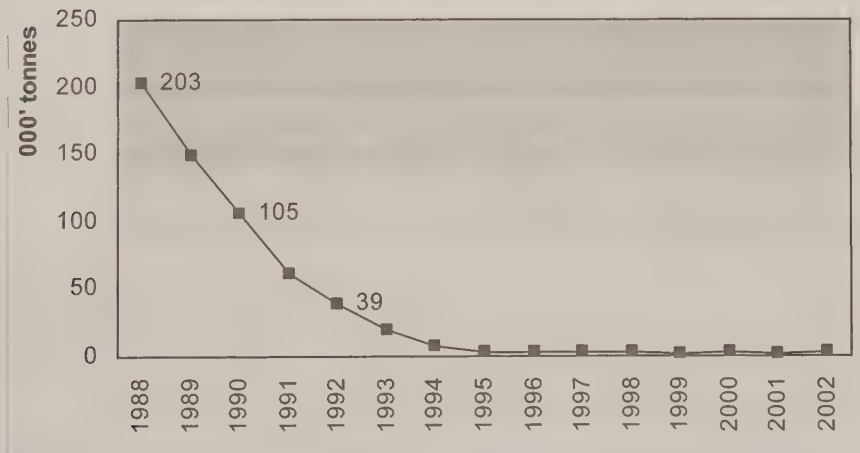
From 1991, the difficult economic and social situation in the country, lack of financial resources, inflexible banking and credit policies, and loss of the former USSR consumer market all had an extremely negative impact on the Georgian economy in general and especially on the fishery sector.

The ocean-going fishing fleet was largely sold to Ukraine and the remainder of the fleet appeared to be non-profitable since access to fuel was restricted (because of high prices), as was availability. Container materials, nets and other gears and facilities for vessel maintenance were similarly limited.

Figure 2 shows that fisheries production in Georgia declined rapidly between 1988 and 1995. In the year of independence (1991) production was still around 61 000 tonnes, while this figure went down to 3 800 tonnes in 1995. In 1992–1993 oceanic fishing by the Georgian fleet came to a halt. It is generally estimated that annual fisheries production between 1996 and 2002 was around 2 500 to 3 000 tonnes, although some maintain that the actual production levels were as low as 1 500 tonnes in 1999.

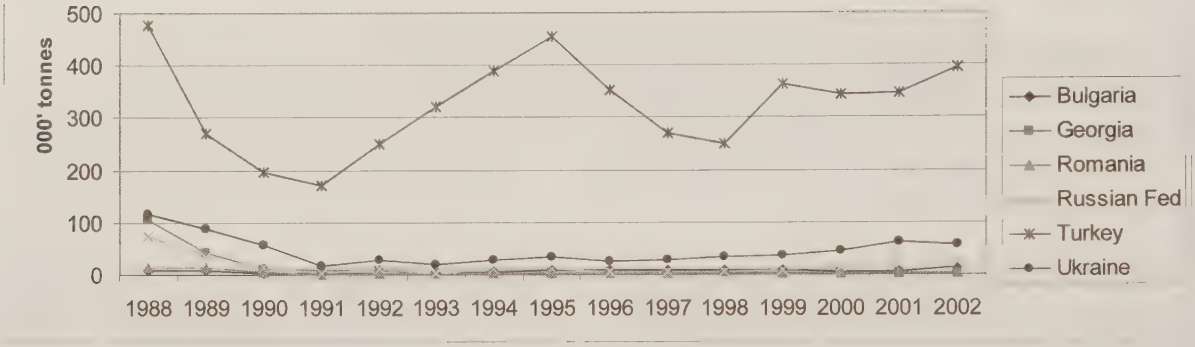
The fact that not only Georgia's capture fisheries production declined in the late 1980s and early 1990s, but also that of some of its neighbouring countries, is depicted in Figure 3. The figure shows that capture fisheries production in the Black Sea decreased considerably from 1988 to 1991 from almost 796 000 to 201 000 tonnes. Over this period, catches from Turkey, Ukraine, the Russian Federation and Georgia all had a declining trend. However, from 1992 onwards it seems that Turkish catches increased again to above 250 000 tonnes annually, while those of other Black Sea countries continued to be below 50 000 tonnes. It was only in 2001 that the Ukrainian Black Sea fishing fleet achieved a catch similar to that of 1990.

FIGURE 2
Total fishery production in Georgia, 1988–2002



Source: FAO FishStat+.

FIGURE 3
Capture fisheries production in the Black Sea by selected countries, 1988–2002



Source: FAO FishStat+.

Since 1997 Ukrainian and Turkish vessels have started to fish again in the Georgian EEZ. The volume caught in Georgian waters increased from 1 400 tonnes in 1995 to 12 200 tonnes in 2003 (Annexes 1 and 2) and, according to the season, from 2 500 tonnes in 1997/98 to 9 400 tonnes in 2003/04 (Annex 3).

Fishing activities using passive gears (trammel nets, marine keepnets, gillnets, longlines, fyke nets, rod and line and others) in the Soviet period were largely conducted by semi-military organizations which consequently contributed to the security of the country. Fish resources – particularly places where species such as red mullet, gobies, picarel and mullet were abundant – were designated as reserves. Since independence, illegal, unregistered and unreported (IUU) fishing takes place more frequently, since the above form of security, which also prevented illegal fisheries activities, no longer exists.

At the beginning of the 1990s the privatization of aquaculture farms and specific lakes suitable for aquaculture took place. Unfortunately, the farms were sometimes in the hands of farmers who were both quite incapable and incompetent. As a result of lack of financing and fish culture experience some of the farms were transformed into agricultural areas. This led to the destruction of shops, hatcheries, ponds and hydrotechnical structures. Several farms were not worked for many years and as a result the total aquaculture production of commercially valued species fell from 300 to 500 tonnes. Some small-scale farms remained and new private industrial farms were founded. Towards the end of the 1990s these farms produced approximately 650 tonnes of fish annually.

3. The current status of fisheries in Georgia

In this chapter the availability of natural resources suitable for fisheries and aquaculture will be discussed, together with marine and inland capture fisheries production; aquaculture production; the state of fish resources and fleets; employment in the fishery sector; processing and marketing of fishery products; trade in fishery products; domestic consumption of fishery products; institutional, legal and policy frameworks; donor assistance to the sector; and other important issues.

3.1 NATURAL RESOURCES AND POTENTIAL OF THE FISHERY SECTOR

Geography

Georgia is situated in Eastern Europe, in the central and western parts of the Caucasus. Its territory is approximately 69 500 km^2. The country is rich in hydrobiological resources. There are 25 075 rivers and streams with a total length of 54 768 km. The rivers belong to the basins of the Black Sea and the Caspian Sea. There are 860 lakes with a total surface area of 170 km^2 and 12 reservoirs with a total surface area of 107 km^2 (Vladimirov, 1981). The country borders the Black Sea to the west. The length of its coastline from Psou (40°01'E, 43°39'N) to Sarpi (41°55'E, 41°52'N) is 330 km.

The narrow continental shelf off the Black Sea coast of Georgia and the quantity of hydrosulphide in coastal waters are the main reasons for the abundance of pelagic fish species (anchovy and sprats) and the scarcity of bottom (turbot) and demersal (whiting, red mullet, shad and others) fish species.

Aquatic resources

Of the 184 fish species and subspecies known to inhabit the Black Sea (Rass, 1987), 104 species were also to be found in the Georgian coastal zone in the early 1980s (Meskhidze and Burchuladze, 1984). However, at the beginning of the twenty-first century only 69 species and subspecies were recorded (Komakhidze *et al.*, 2003).

At present, there are five main fish species of commercial value: Black Sea anchovy (*Engraulis encrasicolus ponticus Alexandrov*), Black Sea sprat (*Sprattus sprattus phalericus*), Black Sea whiting (*Merlangius merlangus euxinus*), spiny dogfish (*Squalus acanthias*) and Black Sea red mullet (*Mullus barbatus ponticus*).

The most abundant species in the Black Sea is anchovy, which has significant environmental importance and commercial value (Prodanov *et al.*, 1996). Its exploitation is mainly connected to wintering of the species in southern and southeastern parts of the sea (Anatolian coast of Turkey and Georgian coast), which are sheltered by the main Caucasus range from the influence of winds. Furthermore, the cold current from the west does not reach these areas and water temperature falls no lower than 6°C (Knipovich, 1932).

From 1997/98 to 2002/03 the biomass of anchovy resources was assessed by the use of acoustic methods during the fishing season. The average quantity of stocks estimated was around 288 000 tonnes (Table 4) and maximum sustainable yield (MSY) was calculated to be around 100–120 000 tonnes. Taking the stocks into consideration and the currently active fleet of 36 seiners which, using purse-seine nets, can catch some 10–12 tonnes per vessel per day during an average season of 55–60 fishing days, the maximum catch of the fleet would not be much higher than 25–30 000 tonnes annually. This means that a considerable part of the stocks would be underexploited if it were not harvested by foreign vessels.

The recent increase from 200 to 361 vessels (unofficial data) in the Turkish fleet fishing for anchovy in the waters near the Turkish-Georgian border and coast is a serious threat to anchovy resources.

TABLE 4
Anchovy resources and catches recorded in 1997/98 to 2003/04

Seasons	Stocks (*tonnes*)	Catches in Georgian waters (*tonnes*)
1997/98	178 500	2 454
1998/99	390 000	4 202
1999/00	380 000	7 077
2000/01	260 000	7 833
2001/02	250 000	5 063
2002/03	–	7 200
2003/04	–	8 444

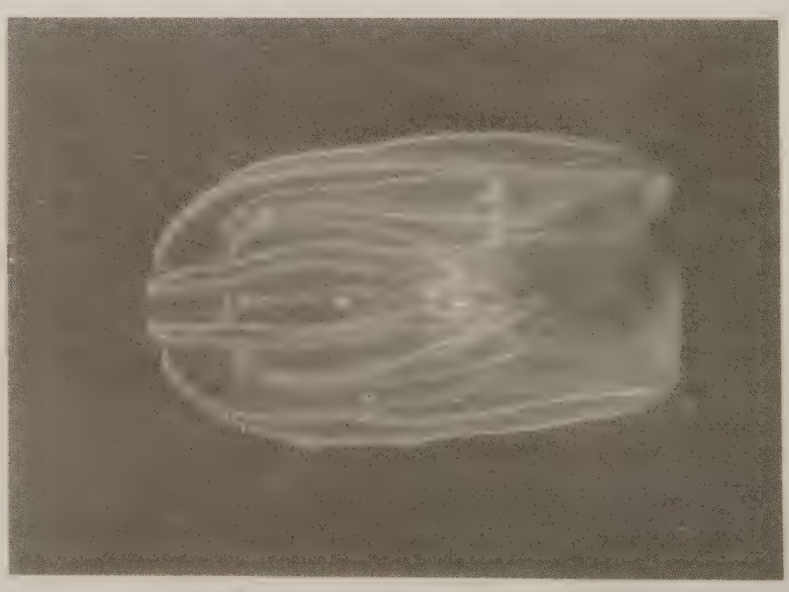
Biometrical parameters of anchovy are used to describe the current condition of the stock in Georgian waters. Over the period 1997/98 to 2003/04 a reduction in anchovy age groups is visible as a significant percentage increase of the 0+ age group (Annex 4). Moreover, a significant reduction of mean weight combined with a decrease in fatness of stocks was noted.

Pollution of the aquatic environment

Pollution, bottom-trawling and other anthropogenic influences have resulted in a decline in fish biodiversity and biomass. The consequences of Georgia's lack of national fishery policy also contribute to this decline. Georgia is a European gateway for raw material (oil, gas) transfer from Asia. This gateway function is considered by scientists to be a threat to the aquatic environment because of the risk of oil pollution. In spite of the fact that environmental policy is not a priority for many developing countries, Georgia has initiated a process to assess and monitor the environmental conditions of the coast, following the agreements made at the Bucharest Convention in 1992 and in the Odessa Declaration and Black Sea Strategic Action Plan.

An example of aquatic pollution is the invertebrate predator-ctenophore (*Mnemiopsis leidyi*) (see photo) that was accidentally introduced into the Black Sea environment in the 1980s.

Ctenophore are competitors of anchovy since the species predate on anchovy eggs and larvae. The mass distribution of ctenophores in the Black Sea, which coincided with a period of overexploitation in the mid-1980s of anchovy resources near the Georgian coast, resulted in a decline in these resources and also negatively affected stocks of scad and red mullet.



The biomass of ctenophores reached its peak towards the end of the 1980s and was estimated at around 1 billion tonnes (Shuskina and Musayeva, 1990; Shushkina and Vinogradov, 1991; Zaitsev, 1996; Prodanov *et al.*, 1996). These authors suggest that sea

pollution and the mass distribution of ctenophores caused changes in plankton composition. In particular, the amount of *Copepoda* and other edible zooplankton organisms declined by 15 to 40 times.

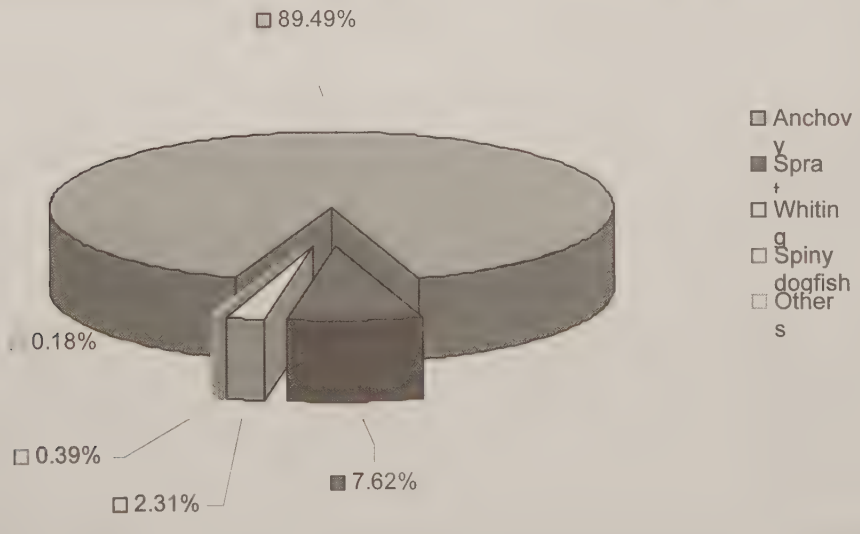
Acoustic and oil pollution is considered to be affecting the anchovy stocks that winter in an area near Supsa where there is an oil terminal operated by British Petroleum. An example of acoustic pollution is the shooting range which, since the Soviet period, is located in Gonio, south of Batumi. The range has a negative influence on fish populations in that area and prevents fish migration towards the Georgian coast.

Recent analysis of widespread fish species showed that stocks of demersal spawners are depressed, i.e. those that lay eggs on aquatic plant and underwater subjects, make nests and take care of their progeny. Some species that entered the Black Sea from the Mediterranean in previous decades are also disappearing – pollution and heavy traffic in the Bosphorus Strait are the main reasons for this change. In recent years, stocks of scad seem to have increased again. Bonito stocks, which are very susceptible to mackerel and water quality, have also reappeared – a sign of ecological improvement (Komakhidze *et al.*, 2003).

3.2 MARINE CAPTURE FISHERIES

Anchovy is the main target species for the Georgian marine capture fisheries fleet. Other targeted species of commercial interest are sprats, whiting and spiny dogfish. The average amount of sprats, whiting and dogfish stocks in Georgian waters in stocks calculated over the last seven years is 2 700, 1 000 and 1 000 tonnes, respectively. The share of these commercial fish in the total catch is limited to less than 10 percent (Figure 4).

FIGURE 4
Average catch composition, 1996–2003



At present, the marine fishing fleet consists of 36 seiners of medium engine power (110–225 HP). As the fleet is targeting mainly anchovy stocks it is equipped with purse-seine and trawl nets. Sprats, whiting and spiny dogfish are caught by trawl in summer.

The fleet consists of vessels constructed during the Soviet period. They have not been modernized and are repaired and maintained only to a limited extent. All vessels could therefore be considered as depreciated. Their engines vary between 150 and 225 HP (see photos). Twenty-nine of the 36 seiners are registered in Poti (see also the map in Annex 9). Five of these originally belonged to the fishing companies that moved from Abkhazia (Gagra Ltd and Sukhumi -2 Ltd). Because of difficulties in taking purse seines from Abkhazia these seiners are allowed to fish with trawls.

Type SChS-225 seiners in the port of Poti

Type SChS-150 seiners in Anaklia harbour

The seiners generally operate at a maximum distance of 5 miles from the shore.

Together with the medium-sized seiners mentioned above, there are 324 small-scale fishing boats involved in coastal capture fisheries. They are equipped with 103 seine nets, 324 gillnets, 12 bottom lines, 26 cast nets and 100 fishing rods. Most of these small-scale boats are *motofelugas* (motorized wooden boats).

BOX 1

An example of small–scale fisheries on Lake Paliastomi

Seven brigades of fishermen, equipped with 20–mm mesh seines of 250–300 m long, operate on the River Kaparchina, which flows out from Lake Paliastomi, as well as on the lake itself and the adjacent sea. The daily catch per net is between 2 and 50 kg. Frequently caught species are mullet, pike, bream and shad. Brigades usually consist of about 18 people. A recent investigation of the small fishing boats used on the lake counted 60 motorized boats and around 130 non-motorized wooden boats. Fishermen usually combine motorized and non-motorized wooden boats. The average annual catch per motorized boat is estimated at 2 tonnes and total annual catch on the lake at around 100 tonnes. Despite the fact that fishing activities on the lake are prohibited, fishing is one of the main sources of income for the people living on the lake shores. Fish caught are used for home consumption or sold at the markets of Poti, Maltkavi and Ckalcminda (Ureki). The number of women involved in selling fish is around 50. Besides the fishing activities tolerated by the brigades mentioned above, there are also some 25 poachers, who use electric fishing methods that threaten the lake's fish resources. It is estimated that more than 500 people are directly involved in fishing and related activities on and around Lake Paliastomi. This means that the livelihoods of over 2 000 people would be affected if the official fishing ban were to be actively enforced, without any provision for alternative livelihood opportunities.

3.3 INLAND CAPTURE FISHERIES

Georgia is endowed with a large number of rivers and lakes and, in addition, there are a number of artificial reservoirs. In many of these inland waterbodies capture fisheries activities are undertaken. For this review study MEFRI investigated the current situation in the main lakes and reservoirs: Lake Paravani (3 700 ha), Khrami reservoir (2 770 ha), Lake Kartsakhi (2 650 ha), Lake Tabatskuri (1 452 ha), Sioni reservoir (1 280 ha), Lake Jandari (1 230 ha), Tkibuli reservoir (1 210 ha), Shaori reservoir (1 022 ha) and Lake Saghamo (458 ha).

The main commercial fish species caught in these lakes and reservoirs are the following: lake trout (*Salmo trutta caspius lacustris*), Romanov lake trout (*Salmo trutta caspius romanovi*), common carp (*Cyprinus carpio*), vendace (*Coregonus albula*), chub (*Leuciscus cephalus orientalis*), crucian carp (*Carassius carassius*), silver carp (*Hypophthalmichthys molitrix*), bighead carp (*Aristichthys nobilis*) and various barbels (*Barbus tauricus escherichi, B. capito and B. lacerta cyri,* among others).

The average annual capture fisheries production in the lakes and reservoirs investigated is difficult to measure since poaching is a widespread practice. Based on discussions with fishers, lake managers and local authorities, the inland capture fisheries production of the nine lakes and reservoirs mentioned above is estimated at around 350 tonnes in 2003, while the total inland capture fisheries production of Georgia is estimated at 388 tonnes. This total production increased slightly to an estimated 400 tonnes in 2004.

Productivity of most of the lakes and reservoirs is poor, mainly as a result of low water temperatures, lengthy coverage of the water surface with ice, wide fluctuations in water levels, limited natural reproduction of the main commercial species and no restocking of fingerlings as many hatcheries are not currently operating because of lack of funding.

Nevertheless, some lakes such as Paravani provide favourable conditions for spawning for some carp species and trout. There are some tentative initiatives from a few dedicated local people who aim to increase the fish stocks in some of the lakes (e.g. Paravani and Jandari) through stocking with fingerlings of trout, vendace and ripus (*Coregonus albula*). Some lakes have favourable water conditions (quality, temperature, mineral contents, vegetation and PH) for algae blooms that stimulate fish productivity. Hardly any hydrobiological, hydrochemical and ichthyologic information is available at present for other reservoirs and lakes (such as Kartsakhi), which makes it difficult to assess their fish production capacity.

Recently the ownership of some of the lakes and reservoirs (e.g. Lake Jandari, Shaori reservoir and Tkibuli reservoir) was transferred to the private sector. This resulted in more frequent restocking of these privatized waterbodies with fingerlings. In order to make profit from the waterbodies, the private sector establishes and enforces management measures, carries out research and tries to attract anglers (hobby fishers) to whom (temporary) licences are sold.

3.4 AQUACULTURE

While aquaculture in Georgia was well established in the 1950s, the number of aquaculture farms and hatcheries for restocking of inland waterbodies has gradually

declined. Unfortunately, no official statistical data and information on aquaculture have been collected in the country over the last 15 years.

The official register of the Department of Fisheries (DoF) contains 84 inland waterbodies (ponds, lakes and reservoirs) that are used for fisheries purposes. It is estimated that there are some 50 unregistered small waterbodies that are used for fisheries in addition to these official figures. Officially registered are 25 small trout farms; however, it is estimated that there are currently some ten more that are unregistered. Annex 5 shows that there are many more aquaculture farms in Georgia than those registered. In early 2004 it was found that there are at least 81 farms where fish production takes place in ponds. In addition, at least six hatcheries are reproducing a range of species, including *Cyprinus carpio* (common carp), *Hypophthalmichthys molitrix* (silver carp), *Ctenopharyngodon idella* (grass carp), *Varicorhinus capoeta* (barb), *Carassius carassius* (crucian carp) and *Silurus glanis* (catfish).

The area of ponds, lakes and reservoirs currently being restocked with fingerlings is estimated to be in the order of 3 200 ha and total aquaculture production may reach up to 1 000 tonnes of fish annually (among which an estimated 600 tonnes of common carp and 250 tonnes of grass carp). The total production of the 35 (registered and non-registered) trout farms is estimated in recent years to be in the order of 120 tonnes of fish annually.

Most of the fingerlings (particularly those of common and grass carp) used by aquaculturists are produced in Georgia. Some aquaculturists are self-supporting with regard to fingerling production, while others have to purchase their fingerlings in nearby hatcheries. Unfortunately, a number of inland waterbodies (including ponds) cannot be restocked periodically because the owners or operators cannot afford to purchase fingerlings.

Approximately 70 percent of the trout eggs, fry and fingerlings for trout farms are produced in Georgia while the remainder is imported. The fingerlings of carp, trout and other species produced domestically are generally considered to be of poor quality. The absence of research programmes for genetic improvement, fish health management and fish feeding is considered to be one of the main reasons.

The lack of good-quality feed for trout culture in Georgia is one of the main constraints to development of the subsector. Fishmeal for the production of fish feed is generally imported from Turkey and/or Denmark, which makes it very expensive (about US$1.20 per kg). Aquaculturists sometimes also import commercial fish feed of well-known brands at high prices. Georgia's capture fisheries fleet catches anchovy and other marine species, some of which could be used for the preparation of fishmeal and aquaculture feeds, but at present the limited quantities of fishmeal produced in the country are exported for hard currency. This practice prevents Georgian aquaculturists from taking advantage of the raw material produced within the country for the preparation of the quantities of fish feed they need.

The pond culture of common and grass carp benefits from fertilization with both organic and non-organic fertilizers. Unfortunately, the majority of aquaculturists cannot afford at present to invest in fertilizers because they do not have enough working capital or access to formal credit sources.

Aquaculture is considered to have good prospects for future development in Georgia. In the short term, the production of carp in ponds, lakes and reservoirs is being encouraged by the domestic market demand, which is far from being satisfied. Demand for low-priced fish in rural areas and small towns is particularly high. Doubling the annual aquaculture production of carp to almost 2 000 tonnes seems a possibility with only slight improvements in access to and availability of fertilizers, fish feed and fingerlings. In the longer term, the establishment of an aquaculture extension and monitoring system, improvements in the supply of high-quality fingerlings and access to credit would make it possible for an annual production of around 5 000 tonnes of fish to be achieved.

The demand for trout on the domestic market seems to be showing a positive trend, which is reflected in the development of trout aquaculture in Georgia in recent years. As trout culture is constrained largely by limited access to and availability of domestically produced fish feed and fingerlings, it would be possible to increase domestic production of this species in a relatively short period provided that these two constraints are lifted.

Many inland waterbodies are not monitored or restocked periodically with fingerlings because the owners and/or operators do not have sufficient financial resources to purchase the necessary fingerlings. In many cases, fish depend only on natural circumstances for their growth, since producers also fail to provide fertilizers.

3.5 FACILITATING INDUSTRIES

Fish production facilitating industries are not very well developed in Georgia. Few companies produce or trade in fishing gears and icing and freezing equipment, and shipyards that construct modern fishing vessels are non-existent. Vessel engines (inboard as well as outboard) are rarely on sale and spare parts are scarce; fuel and other lubricants are expensive and not always available.

Support from facilitating industries for aquaculture is also fairly limited. Only a few hatcheries sell a small variety of species. Carp are generally fed with a mix of corn, wheat and sunflower and soybean cake. Commercial feed for trout culture is being imported since no animal feed producer makes fish feed in the country. Prices for purchased feed range from US$0.22/kg for carp feed to US$1.30/kg for trout feed (pellets). Inorganic fertilizer that can be used for fertilization of fish ponds is available but not widespread in Georgia. The current market price of the most commonly used inorganic fertilizer nitrogen Nh_4NO_3 is around US$148 per tonne; however, prices of other imported fertilizers are higher (around US$600 per tonne). Chemicals and drugs for treatment of ponds to improve the water quality for fish culture and for treatment of fish diseases are not used and are therefore not available on the market.

3.6 FISH PROCESSING

There used to be a dynamic fish processing industry in Georgia with plants in Tbilisi, Kutaisi, Batumi and Sukhumi. To date, for various reasons, no large processing plant is operational. The main reason is probably that the former market for non-food anchovy (USSR, Ukraine and Moldova) was gradually lost after Georgia's independence in 1991. In 1998 (Eastfish, 1999) only six fishing companies were still involved in processing fishery products and three other specialized plants were functioning. The only fish processing carried out at that time was cleaning, chilling and salting of anchovy, freezing

of rapana meat and smoking of a small variety of species. All companies listed in 1998 stopped their fish processing activities soon afterwards.

In 2005 it is planned that three companies will (re)start processing fishery products in Georgia. These plants will focus on the production of anchovy flour and oil. Two of them (Kapadokia Ltd and Laguna Ltd) are located in Poti and one (Tedoradze Ltd) is located in Batumi. The maximum production capacity of Kapadokia and Laguna is 250 tonnes/shift and 300 tonnes/shift, respectively. The processing plant in Batumi is less industrial and will produce 50 tonnes/shift at maximum capacity. Employment generated by the three plants will be a total of approximately 220 people.

In addition to large-scale industrial processing, smaller volumes of fish are being processed in an artisanal fashion by some wholesalers and retail shops. This fish, processed in several small shops in Tbilisi, is mainly oriented at adding value to cheap imported fish. Smoking and salting of fish are the most common practices. According to data collected by the Ministry of Economic Development only 8.6 tonnes of fish were processed in Georgia in 2003.

The lack of modern fish processing facilities has significant negative effects on the Georgian fishing fleet and on fishery products. Although the fleet could catch more than it has in recent years, since stocks of certain species such as anchovy are currently relatively large, the lack of processing facilities and limited market demand for fresh anchovy prevent the fleet from using a larger share of its fishing capacity. Consequently its economic viability is constrained.

3.7 MARKETING OF FISH AND FISHERY PRODUCTS

At present there are specialized fish markets "or alternatively parts of larger food markets designated for the sale of fish" in every major city in Georgia. In the coastal area, fish markets can be found in Batumi, Poti, Ureki and Mattakva.

Some of the fish markets are privately owned while others are owned, managed and maintained by the community/city authorities. An example of a privately owned fish market can be found in Batumi (see photo).

The fish market in Batumi is characterized by clean and hygienic facilities. The market has concrete floors and stone tables, a freezer facility, roofs, electricity, tap water and a fence. On average days some 12 retailers sell fishery products there. The main products

sold are sardines, horse mackerel, mullet and trout. Prices range from US$1.5/kg for small sardines to US$4.5/kg for small trout.[2] Smoked sardines and mackerel are generally sold at prices of around US$5.5/kg. Retailers wanting to sell fish at the market pay a market fee of US$80 per month per table and a further US$80 per month is added if they use the freezer facility, which is managed by the market owner. Average sales of fishery products are estimated at 100 kg/retailer/day. Daily sales for the whole market range between 1 and 1.5 tonnes, depending on supply and demand, which fluctuate with the seasons and days of the week. Marketing margins for retailers at the Batumi fish market are generally between US$0.25 and US$0.55/kg, depending on the species and the value added.

The largest food market in Tbilisi is called the "peasant market". Here some 20 retailers sell fishery products daily, originating from catches by the national fleet, from aquaculture and from imports. The variety of fish offered is limited to sprats, sardines, mackerel, sea bream, flathead mullet, hake, salmon, crawfish, sturgeon and trout. Prices range between US$1/kg for Baltic sprats to US$9/kg for sturgeon from Azerbaijan. A considerable part of the fish for sale is imported (e.g. frozen salmon from Norway). Trout is the only domestic aquaculture product at the market. It is sold fresh or alive at US$4.5/kg for fish of ± 200 g. Market fees vary largely – a counter outside is just US$2.5 daily, while inside shops pay between US$20 and US$25/day (including electricity and freezer rental fees).

It is believed that in the metropolitan area of Tbilisi some 50 fish retailers are active daily in the various markets. Total sales of fishery products by market retailers in Tbilisi are estimated to be between 5 and 6 tonnes per day in summer and between 10 and 12 tonnes in winter.

In wholesale activities, including transport of fishery products from coastal areas to Tbilisi, an estimated 100 intermediaries are involved. The relatively more expensive fishery products, such as sturgeon, salmon and trout, are often sold directly to restaurants by intermediaries and aquaculture producers, since restaurants constitute the main market for these species.

Cold storage facilities exist in Tbilisi, Kutaisi and Poti. They are used for storage of fish among other food items. Imported frozen fish is generally stored by wholesalers/importers until distribution to markets and supermarkets takes place. Moreover, part of the fresh fish is frozen there.

The market share of supermarkets in Tbilisi (and other major cities in Georgia) in the sale of fishery products is increasing steadily. This is a recent trend and information on the extent of the increase is not yet available. In general, fishery products are more expensive in supermarkets than in city food markets and specialized fish markets. Frozen salmon and trout are sold for US$3.5 and US$5/kg, respectively, while smoked fillets of catfish and sturgeon reach customers at prices of US$9 and US$21/kg, respectively.

A large proportion of the imported fishery products sold in supermarkets is packed at origin, labelled and sometimes branded. An increasing number of more affluent citizens (particularly in Tbilisi) have a preference for these products since prepacked imported products are generally considered to be of better quality. The selection of fishery products in some supermarkets is often larger than in marketplaces and includes upmarket value-

[2] The exchange rate used in this report is 1 Georgian lari = US$0.5.

added speciality products. For example, the Khvamli supermarket in Tbilisi sells more than 20 different species of frozen fishery products (including black tiger shrimp from Thailand, New Zealand mussels, Norwegian salmon, sea bream from the Mediterranean and mackerel from the Indian Ocean); it has a selection of more than 30 different canned fish products (including fish liver, sprats, anchovy, sardines, crab and shrimp); and it sells more than ten smoked fish products (such as catfish fillets, sturgeon, mackerel and salmon). Above all, the supermarket sells live trout, which is in great demand and daily delivery is guaranteed.

Apart from the formal retail channels for fishery products there are a number of coastal and inland areas in Georgia where small-scale artisanal fishers sell part of their catch at roadside stalls. For example, these roadside vendors can be found in considerable numbers on the road between Kobuleti and Batumi. They sell fish (mainly small mullet) for prices between US$1.5 and US$2.5/kg, depending on supply and demand. Some of the roadside vendors do not fish themselves but buy their products from fishers. Their average marketing margin is US$0.25/kg. Average daily sales per vendor vary largely but are generally below 20 kg/day.

TABLE 5
Average off-vessel and off-farm prices ofthe main fish species, 2004

Species	US$/tonne
Anchovy	150
Sprats	200
Black Sea whiting	1 000
Mullet (small)	1 000
Shad	1 250
Mullet (large)	1 500
Spiny dogfish	1 250
Black Sea salmon	15 000
Trout	3 000
Sturgeon	12 500
Gobies	1 000
Turbot	7 500
Sea bream	1 000
Common and Chinese carp	1 500

Common and grass carp reared through aquaculture are mainly marketed in rural areas with some small quantities reaching the markets of Tbilisi and other big cities during the main harvest periods. The retail price for these fish species is between US$1 and US$1.5/kg. Trout produced by aquaculture farms is sold mainly in Tbilisi at a market price of US$3 to US$3.5/kg.

Prices of fishery products tend to fluctuate over the year. The prices of fresh fish are generally lower in winter than in summer; consequently, demand for fresh fish is higher in winter. Canned fishery products generally sell better in summer.

The 2004 average off-vessel and off-farm prices of the main fish species are presented in Table 5. Anchovy and sprats are the least valuable species, but their marketed volume is such that they occupy an important share of the total market for fishery products in Georgia. Sturgeon and Black Sea salmon are caught only in small quantities but demand is high and this is reflected in the price.

3.8 FISH TRADE

To satisfy domestic demand for fishery products, Georgia imported between 2 500 and 5 000 tonnes in recent years. Most of these imported products come from Armenia (fresh, salted, frozen and smoked trout), Azerbaijan (frozen and smoked sturgeon), Turkey (smoked mackerel and bonito) and Russia (various species in frozen, salted and canned form).

More than 95 percent of fishery imports in 2003, both in volume and value, were in frozen form (Annex 6). The main imported species was mackerel. The volume of imports in 1999 was 4 180 tonnes. This volume decreased considerably in 2000 and 2001 to just over 2 500 tonnes and increased again to almost 4 840 tonnes in 2003. Initial (unofficial) data show that the volume of imports is increasing rapidly, reaching almost 6 000 tonnes in 2004.

Imports of fishery products in terms of value increased steadily over the years, from US$1.1 million in 1999 to US$2 million in 2003 (Annex 6). In particular, the value of imported frozen fish increased from US$1 million in 1999 to US$1.9 million in 2003. It is estimated that the value of imports in 2004 will have reached over US$3.5 million.

Whereas imports of fishery products by Georgia were always higher than exports in the 1990s, this has recently changed. In 2001 and 2003 exports in terms of volume were higher than imports, largely resulting from the fact that Ukrainian and Turkish fleets catch anchovy in Georgian waters and land it in Turkey (fresh, but reported in Annex 7 as live fish) and in Ukraine (frozen). The catch of these fleets is thus registered as exports.

Exports of fishery products have fluctuated widely in recent years (Annex 7). The volume of exports in 1999 was estimated at 2 637 tonnes but it decreased to 879 tonnes in 2000. This fluctuation is primarily caused by the access regime used for foreign fleets to Georgian-owned and controlled parts of the Black Sea. In some years many vessels are allowed access and in others hardly any permits are given out to foreign vessels.

In terms of value, exports of fishery products by Georgia are small (Annex 7). In the period 1999 to 2003 the value of exports fluctuated between US$115 000 in 2002 and US$349 000 in 2003. It is expected that the value of exports in 2004 will have been less than in 2003, again resulting from less catch by foreign fleets in Georgian marine waters.

The port of Poti is the most important for imports and exports of fishery products. In 2003 some 36 percent of total imports of fishery products (by volume) entered the country via the port. In the same year, imports of fishery products through the second most important fishing port in Georgia, Batumi, were 4 percent of total imports in volume (Annex 8). In terms of value, imports through customs in Poti were some 40 percent of total imports of fishery products in 2003. It is clear that a large part of these imports enter the country by road.

Most fishery products were exported in 2003 through the port of Batumi – some 77 percent of total exports. Another 22 percent were exported via the port of Poti (Annex 8), even though Poti had been generally more important for exports of fishery products in earlier years.

3.9 FISH DEMAND AND CONSUMPTION

Fish consumption levels in Georgia are low. It is estimated by the Department of Statistics that annual per capita consumption is around 7 kg. However, other sources estimate that consumption of fishery products is less than 2 kg (live-weight equivalent) per capita per year at present. By comparison, average per capita consumption was stable at about 19 kg during the 1980s. MEFRI recently carried out some research on the demand for fishery products and subsequently estimated that current demand is between 30 and 35 kg[3] per capita per year. Per capita consumption in coastal areas appears to be higher because of better access to fresh products and the wider availability of fish.

In Georgia there is no tradition of consumption of molluscs and aquatic plants. Before independence, most fishery products sold in Tbilisi were in frozen form. Frozen fish is still one of the main products and chosen by a sizeable proportion of the population, although preference is gradually being given to fresh products.

At present fish is sold fresh, frozen, salted and smoked and as *balik* (fish products) in the city markets, on the Sarpi-Psou highway and on the Red Bridge in Tbilisi. A considerable proportion is sold to consumers at landing sites in or near coastal towns.

The current domestic demand for fresh anchovy is estimated at 440 tonnes per year. This equals the catch of around 55 fishing days by the Poti fishing fleet. During the fishing season some 8 tonnes are marketed each day – about 3 tonnes in Adchara and 5 tonnes in Poti. This means that of a total catch of 9 000 tonnes of anchovy (as in 2003), less than 5 percent currently reaches the domestic market because of lack of demand for fresh anchovy.

Limited landings (in terms of volume) of commercially valuable species with high market demand and the abundance of small-sized fish with low market demand create a great discrepancy between supply and demand in Georgia. The current low production levels of aquaculture and inland capture fisheries cannot supply the market with sufficient produce of carp, trout, vendace, catfish and other freshwater and brackish water species that were in high demand in earlier decades and apparently still are.

There is evidence that much of the population prefers larger-sized frozen fish, such as mackerel, scad, hake, captain fish, salmon and sturgeon, which form a considerable part of imported frozen fishery products.

3.10 FISHERIES EMPLOYMENT

In recent years a sharp decrease in employment in marine capture fisheries in Georgia has been noted. The main reason for this decrease is the lack of investment in the fishery sector and in marine fisheries in particular. Fishing vessels are often not maintained or

[3] Price and demand elasticities are not taken into consideration in this estimation.

repaired properly and the number of non-operating vessels has increased as a result. A similar situation can be seen in inland capture fisheries and aquaculture. A slight increase in employment in the processing and marketing of fishery products and recreational fishery-related activities has occurred over the last few years. Moreover, since IUU fishing is widespread in Georgian inland and marine waters, an unknown number of people find a source of income and employment in these activities.

The official fishery sector employment figures of the Department of Statistics in Georgia can be found in Table 6. Interviews with fishermen show that they earn 200 lari per month, which corresponds to the minimum amount for survival.

TABLE 6
Fisheries employment figures in Georgia, 1999–2003

Years	1999	2000	2001	2002	2003
People involved in fishing	1 200	800	600	600	700
Average monthly salary in Georgian lari	9.2	22.1	43.0	37.5	46.2

It is widely believed that the official statistics are an underestimation. Other unofficial information sources estimate that in 2004 around 3 300 persons found employment and income in fishery-related activities in Georgia. Of these, some 300 were working as skippers, captains or sailors in the marine fishing fleets based in Poti and Batumi. Moreover, it is estimated that Georgian small-scale coastal fisheries currently provide employment for approximately 1 500 full-time fishers and 300 part-time/seasonal fishers. A further 500 are employed in processing, distribution and marketing and another 400 earn an income from aquaculture. Capture fisheries and management of the lakes and reservoirs officially provide employment for approximately 80 people (fishers and administrators). It should be noted here that most of the inland catch is taken by poachers. The number of people involved in IUU fishing activities is hard to estimate and is therefore not included in the total of 3 200 (Table 7), although the number of IUU fishers probably runs in the hundreds.

TABLE 7
Estimated fishery sector employment, 2004

Employment field	Estimated number of persons
Marine fishing fleet	300
Coastal small-scale fishing	1 500
Processing and marketing	500
Inland capture fisheries	200
Aquaculture	400
Administration and research	100
Total	3 200

The average age of people employed in the fishery sector is about 40 and most fishers are men. Distribution and marketing is an area where many women are also involved. Most of the fishers have completed secondary technical education, while seiner captains and administrative staff of fishing companies generally have a higher education degree.

3.11 FISHERIES ADMINISTRATION

Institutional setting

Over the last decade the Government of Georgia did not consider the fishery sector as important, which resulted in limited funding and staffing of the DoF under the MoA and an unclear division of tasks and responsibilities between the DoF and other government institutions. On the one hand, the MoA – through the DoF – is the lead ministry in the area of fisheries policy and sector development. On the other, the Ministry of Environment Protection and Natural Resources (MEPNR) – through the Fishery Branch of its Department of Biodiversity – bears responsibility for the conservation of fisheries resources and the ecosystems to which they belong. Other government ministries involved in fisheries-related activities are the Ministry of Economic Development (trade issues), Ministry of Finance (taxation), Ministry of the Interior (border control) and a number of ministerial-linked and semi-independent institutions, such as MEFRI, the Coastguard, the Marine Authority of Georgia, the Institute of Zoology, the Maritime Transport Administration and the Bucharest Convention through its Commission.

Table 8 presents a simple overview of the main institutions involved in fisheries inGeorgia.

In the Ministry of Agriculture three departments/agencies are relevant for fishery sector development and management. These are the:

- Department of Fisheries, with a policy-making function within the sector;
- Veterinary Department, which implements food safety measures;
- Food Products' Expertise and Monitoring Agency, which issues licences for fish production activities.

The Ministry of Environment Protection and Natural Resources has two dependent agencies which are relevant for the Georgian fishery sector: MEFRI, which carries out marine fishery research and recommends allowable catches for the Black Sea; and the Institute of Zoology, which carries out fishery research in inland waterbodies.

The Ministry of Agriculture of Georgia, and particularly its agency for property management – Kumi Ltd –, is responsible for (fish) production in watersheds within the country.

The Ministry of the Interior of Georgia has two departments that play a role in fisheries development and management:

- Eco-police Department – is responsible for control of fishing activities and resource conservation.
- Georgian State Border Guard Department – provides control of fishing activities in waters under Georgian jurisdiction.

The Ministry of the Interior, through its Coastguard, controls and provides surveillance over fishing activities in Georgian marine waters.

The state Department of Statistics in Georgia is responsible for gathering, analysing and publishing data, including fishery sector data.

Until recently the DoF was staffed with only eight people, who were unable to carry out their tasks properly since their budget was extremely limited, at about US$6 000 annually. In February 2005 considerable changes took place, which included an increase in staffing (up to 20 people), an increase in staff salaries to the current national civil servant level and a new DoF director.

TABLE 8
The main institutions involved in fisheries in Georgia

Institutions and their current activities with regard to fisheries	Definition of resources	Determination of max. allowable catch	Issue quotas	Issue licences	Enforcement and control	Development planning	Drafting the law	Data collection and information	Increasing abilities of training	Control of output quality	Liaise with stakeholders	Cooperation with other governmental organizations	Scientific research	International relationships
Ministry of Agriculture	–	–	–	x	x	xx	xx	x	x	x x	x x	xx	xx	x x
Department of Fisheries	–	–	–	x	x	xx	xx	x	x	–	x x	xx	xx	x
Ministry of Environment Protection and Natural Resources	x	x	xx	xx	xx	xx	xx	xx	xx	x	x x	xx	xx	x x
Marine Ecology and Fisheries Research Institute (MEFRI)	x x	xx	xx	–	–	x	x	x	x	–	x	xx	xx	x x
Coastguard	–	–	–	–	xx	–	xx		–	–	–	x	–	–
Institute of Zoology	x x	xx	xx		–	x	x	xx	x	–	x	xx	xx	x
Maritime Transport Administration	–	–	–	–	x	x	x	x	x	–	x	xx	–	x x
Bucharest Commission	–	–	x	–	xx	–	–	x	–	x	–	–	–	–

Notes: – no function in this field/area; x = partly involved; xx = largely involved.

Although the situation improved in early 2005, the DoF is still lacking the technical and managerial capacity to carry out its duties efficiently. For example, it is not equipped with modern communication equipment such as e-mail, Internet and fax. The staff have not yet been trained in the use of computers and the number of computers available is extremely limited. Many of the staff have not received training in technical or administrative issues over the last decade, which means that some of them are unaware of the current situation

with regard to fisheries in Georgia. The absence of travel funds to carry out work in the field has largely contributed to their limited awareness. There is a clear need to increase the competence of the staff so that they can contribute effectively and efficiently to the duties and responsibilities[4] of the DoF, which are to:

- elaborate a comprehensive government development policy on fisheries in Georgia and set priorities for all types of fisheries;
- make optimal use of the export potential of fish and fishery products originating from all types of fisheries resources (marine and inland waters plus aquaculture);
- elaborate draft normative acts within the competence of the Department and present them for approval in accordance with existing regulations;
- prepare a fishery investment programme and support its implementation;
- promote the employment of qualified fishery specialists in fishery enterprises;
- produce and deliver fish products to satisfy domestic needs.

In the same DoF charter, the rights and obligations were defined as follows:

- promote the establishment of fishery enterprises and the introduction of modern production technologies to attract investments. Together with other agencies, participate in the assessment of fishery stocks;
- maintain a list of fishery enterprises and create a data bank in accordance with international requirements;
- make recommendations for fish reproduction, grow-out to commodity fish and for taking preventive measures against fish diseases;
- study systematically the market for fishery products and provide information on the current situation and trends;
- prepare plans for the rehabilitation and development of existing fishery enterprises;
- within specified time periods and as required, present proposals for projects, modifications to laws and regulations, plans, government budget, target programmes, etc.;
- submit proposals to higher authorities to decide on issues within the Ministry's competence;
- fulfil the rights and obligations determined in the Law on Entrepreneurs with regard to those enterprises and state property with management delegated to the Department.

It is clear that with its limited human and financial resources the DoF cannot possibly realize all these objectives. The lack of a comprehensive fisheries policy in the government and especially in the MoA exonerates the DoF from being accountable for its activities.

3.12 FISHERIES TRAINING AND RESEARCH

At present there are no formal fisheries or aquaculture education and training facilities in Georgia. This means that Georgian children and students do not have the opportunity to learn about fisheries and aquaculture at school. Both university education and vocational school/practical training are lacking in fisheries. This will have consequences in the medium and long term for sustainable fisheries and aquaculture development in the

[4] Duties and responsibilities are set out in Order No. 2-53 of the former Ministry of Agriculture and Food of Georgia, dated 10 April 2001: On the Approval of the Charter of the Saktevzi Department of Fisheries.

country. The lack of a university education in fisheries is a problem that could be addressed through cooperation with universities in neighbouring countries (e.g. Ukraine, the Russian Federation and Turkey) and European countries where fisheries education at higher levels already exists. However, the lack of a vocational school for practical training in fisheries and aquaculture is something that would better be addressed within Georgia.

Informal training (by sailors and captains) currently takes place in marine fisheries together with aquaculture (by fish farmers), although the trainers' knowledge is often based on what they have learned previously and the skills they have obtained in doing their jobs. Modern technologies and insights are therefore generally not part of their capacity building activities.

MEFRI, located in Batumi, conducts scientific research on marine stocks and biodiversity together with the Ukrainian Department of Fisheries. The overall aim of the research is to restore the overexploited resources along the Georgian Black Sea coastline. MEFRI's mission statement is to survey and protect the natural biodiversity and living resources of the Black Sea and its coastal wetlands and play a leading role in fulfilling Georgia's international obligations under the Bucharest Convention on the Black Sea and the Black Sea Strategic Action Plan (BSSAP). In the 1990s much of MEFRI's research focused on sturgeon stocks, Black Sea salmon, anchovy and sprats.

The Institute of Zoology at the Georgian Academy of Sciences has carried out scientific research in Georgian inland waters to determine their hydrobiological resources. The Institute aims to study the main species in Georgia and undertake hydrobiological and ichthyologic research on inland reservoirs. The scientific work of the Institute on inland fisheries stopped in recent years because of lack of funding.

Over the last few years, research institutes have managed to send some of their staff abroad for M.Sc. and doctorate studies, funded by foreign donor institutions and projects. In this way they have been able to increase the capacity of the staff. Unfortunately, the number of these positions is low and the scholarships offered are, in principle, only a temporary solution. It is generally felt that an educational system should be established in Georgia to create awareness among young people of opportunities in the fishery sector and provide an adequate, tailor-made and modern education for those, young and old, who are interested in working in the fishery sector or wish to increase their skills in certain aspects of fisheries. Such a formal system would make it easier for fisheries research institutes and fishing enterprises to recruit young professionals to work in the sector, for it is currently extremely difficult to find young professionals with interest and the appropriate skills.

It should be noted that in the last few years fisheries research institutions have largely followed the government's limited funded research programme and the research agenda of some foreign donors (European Union [EU], World Bank), abolishing the basic research (e.g. in stock assessment) which was carried out in Soviet times.

3.13 POLICY AND REGULATORY FRAMEWORKS

Policy framework

A national fishery sector policy with objectives or goals for the sector is currently non-existent in Georgia. However, the MoA is preparing a Master Plan for Fishery Sector Development in Georgia, 2005–2020, in collaboration with other relevant ministries and fishery sector stakeholders such as fishers' associations, research institutes and fishing companies.

The current governmental Economic Development and Poverty Reduction Programme (EDPRP) of Georgia, which provides an established overall framework of national economic policy, does not recognize fisheries as a priority sector. Among the objectives, sphere, functions and tasks of the MoA, the fishery sector is not even mentioned. In the 2004 version of the EDPRP, the only references to fisheries and fish were those in relation to the consumption of meat, fish and dairy products and the investments to be made for the rehabilitation of the fishery sector and artificial restocking of sturgeon in the Black Sea.

The Master Plan for Fishery Sector Development in Georgia, 2005–2020 should therefore be considered a framework of policy guidance and as such might assist in incorporating fisheries in the national economic development agenda and future updates of the EDPRP. At the international level, Georgia became party to a number of conventions and agreements over the last decade. These are listed in Table 9.

TABLE 9
Georgian conventions and agreements, 1994–2001

Convention	Ratification
Convention on Biodiversity (CBD)	31 August 1994
Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)	12 August 1996
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)	6 January 2000
Convention on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)	March 2001
United Nations Convention on the Law of the Sea (UNCLOS)	21 March 1996
Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement)	1994
Bucharest Convention on Protection of the Black Sea against Pollution	1994
Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention on Wetlands)	30 April 1996

Among the agreements listed in Table 9, the Convention on Biodiversity, the Convention on International Trade in Endangered Species of Wild Flora and Fauna, the Bucharest Convention on Protection of the Black Sea against Pollution, the UN Convention on the Law of the Sea and the Compliance Agreement should be emphasized.

The Convention on Biodiversity (CBD) provides for the conservation and sustainable use of biodiversity, defined as "the variability among living organisms", including "diversity within species and of ecosystems". Biodiversity conservation and sustainable use are to be pursued by adopting specific strategies, plans and programmes and by incorporating relevant concerns into any plans, programmes and policies. The sustainable use of biodiversity must be a consideration in national decision-making. Parties to the CBD should establish a system of protected areas, rehabilitate and restore degraded ecosystems and promote recovery of endangered species. More information can be found at http://www.biodiv.org/chm/default.aspx/

The Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES). Appendices 1, 2 and 3 to the Convention list the endangered species, including several fish species, of which trading has or might have a negative impact on their existence. CITES emphasizes the strict control to be imposed on trade in these species in order not to jeopardize their survival. The Convention determines the mechanisms for trading in such species. More information on CITES can be found at http://cites.org/

The *Bucharest Convention on Protection of the Black Sea against Pollution* is a regional convention aimed at facilitation of cooperation between states on protection of the Black Sea environment and maintenance of its living resources. The Commission on the Black Sea against Pollution, established under the Convention, supports its implementation. The Commission is currently preparing a draft Convention for Fisheries and Conservation of Living Resources of the Black Sea, which foresees the establishment of a Black Sea Fisheries Commission. The Commission has also produced the Black Sea Strategic Action Plan, which is relevant for Georgia. The text of the Convention can be found at http://www.blacksea-commission.org/OfficialDocuments/Convention_iframe_main.htm/

The UN Convention on the Law of the Sea (UNCLOS) establishes the legal framework for the use of the sea. In addition, Georgia has ratified one international fisheries agreement that implements several provisions of UNCLOS, i.e. the Compliance Agreement. This Agreement – approved by the FAO Conference in 1993 and which entered into force in 2003 – was created to respond to concerns about depletion of fish stocks in the high seas as a result of increasing IUU fishing. In particular, the Compliance Agreement attempts to address the problems of "reflagging" and "flag of convenience" practices used by vessels engaged in IUU fishing. Reflagging in the context of fishing involves the registration of a vessel in the jurisdiction with lax or inefficient control and enforcement regimes so as to avoid capture and other fisheries enforcement action. It also allows registration to be switched from one jurisdiction to another in the event of a history of fisheries violations so as to overcome the cancellation or suspension of fishing rights in the first jurisdiction. This enables offenders to continue operating despite earlier violations. Generally, flag of convenience practices are prevalent in states that are either unwilling or unable to police the fishing rights that they grant. It should be noted that some fishing vessels under the Georgian flag have been quite recently reported as being involved in IUU fishing. The text of the UN Convention on the Law of the Sea and related agreements can be found at http://www.un.org/Depts/los/index.htm/

It should be borne in mind that Georgia has not ratified the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UN Fish Stocks Agreement).

Apart from the obligations under the above-mentioned agreements, the Government of Georgia decided on 21 September 1997 through Resolution N829 (on harmonizing Georgian and EU legislation) that the country is obliged to bring all existing and future normative acts in harmony with the EU regulatory framework.

Georgia, as a member of the Food and Agriculture Organization of the United Nations (FAO), has agreed to the Code of Conduct for Responsible Fisheries. The Code, which was adopted on 31 October 1995 by the FAO Conference, is an influential non-binding or "soft law" instrument, which sets out principles and international standards with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for ecosystems and biodiversity. More information on the Code, technical guidelines on its implementation and the international plans of action developed under the Code, such as the International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries, the International Plan of Action for the Conservation and Management of Sharks, the International Plan of Action for the Management of Fishing Capacity and the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, can be found at http://www.fao.org/fi/default.asp/

Georgia is not yet a member of a number of relevant regional and international fisheries bodies, although interest to join has been shown on various occasions. The main reason for not having joined these bodies has been the lack of government funds available for the fishery sector in the past. The relevant regional fisheries bodies for Georgian fisheries would be the General Fisheries Commission for the Mediterranean (GFCM), the European Inland Fisheries Advisory Committee (EIFAC), EUROFISH in the field of marketing of fishery products and trade, in the area of research through membership in the Network of Aquaculture Centres in Central and Eastern Europe (NACEE) and the Black Sea Fisheries Commission, to be established under the Convention for Fisheries and Conservation of Living Resources of the Black Sea.

Regulatory framework

Currently, Georgia has no fisheries law. Recently, however, it has pursued various legal and administrative initiatives that have resulted in the adoption of a number of laws and regulations that address the fishery sector in various aspects including, *inter alia*:

- The Georgian Constitution (1995, as amended)
- The Law on the Protection of the Environment (1996)
- The Law on Wildlife (1996)
- The Law on Protected Areas (1996)
- The Law on Environmental Permit (1996)
- The Law on Water (1997)
- The Law on General Procedures for Granting Business Licences and Permits (2002, as amended in 2004)
- The Law on Maritime Areas (1998)
- The Marine Code (1997)

- The Law on Food and Tobacco (1999, as amended in 2003)
- The Law on Standardization (1999)
- The Sanitary Code (2003, as amended)
- The Veterinary Law (1995, as amended)
- The Law on Agricultural Quarantine (1997)
- The Law on Veterinary Activities and Licensing and Permits (2003)
- The Tax Code (1997, as amended)
- The Administrative Penalties Code (1984, as amended)
- The Criminal Code (1999)
- The Law on Control of Entrepreneurial Activity (2001)
- The Law on the Privatization of State Property (1997)
- The Law on Promoting and Ensuring Investment Activity (1996)

At the very beginning of the twenty-first century the MoA started to prepare a new law on fisheries for Georgia. The drafting of this new law stopped for some time because of lack of expertise on this issue within the Ministry. In 2004 the drafting process continued with inputs from specialized international lawyers, fishery sector stakeholders, experts from various ministries and national legal experts. An almost final draft law is now available. Governmental approval of this law is likely to take place before the end of 2005, after which a number of regulations under the law will still need to be produced.

3.14 FISHERIES STATISTICS

There have been several collection programmes for fishery data, involving the Department of Statistics, the Ministry of Environment Protection and National Resources, and the Department of Fisheries of the Ministry of Agriculture. Data collection of fisheries-related data was not coordinated among the different government units in the past.

Data collection for estimating fishing effort did not use sampling techniques. Basic variables such as production by species and prices were obtained directly from the landings of licensed fishing units and/or from market research. Information gaps appeared to exist in the small-scale fishing units sector, since most of these operate without a licence.

Production was usually reported for the species included in the licence. Transboarding of fish and seasonal migration of fishing units seem to constitute two possible factors for unreported catch. A third factor concerns fishing activities that take place using beach seines and other methods that do not use a registered or licensed fishing craft.

Fishing effort information is not collected on a regular basis, thus preventing the formulation of basic indicators such as catch per unit effort (CPUE) by boat/gear categories.

The level of local experience in sampling methods and in the effective use of data for basic analyses does not seem to be very high. Inland capture fisheries represent a subsector that, from a statistical viewpoint, is less known than marine capture fisheries. Aquaculture statistics are still a question mark.

However, in 2004 and 2005, with support from the FAO Technical Cooperation Programme, statistical activities are described in much more detail in technical notes on statistics and data collection and in reports of workshops organized by the project. Some general findings and observations are given below.

A frame survey (see also the map in Annex 10) undertaken in Achara has provided up-to-date information relating to approximately 300 fishing units that constitute the coastal small-scale fisheries in the Achara region. There are indications that the uncovered areas contain about twice this number; it would thus seem reasonable to assume that the small-scale fleet comprises close to 1 000 small fishing units. The average length of a fishing unit is 4.5 m and about two-thirds of the fleet is motorized. The fishing gears (at least in the region under study) are fairly limited in variety, consisting mostly of hook and line, trammel nets, seine nets and gillnets.

Data collection should be carried out through sampling operations. Initially, sampling frequency should be eight days, spread over the month and focusing on the two main sites of Bartskhana and Qobuleti. Several trial tests indicated that data collection on catch, fishing effort and prices can be achieved by one agent, possibly an outposted officer of the DoF. A single data collection form can be used for both landings and boat activities. Volumetric tests indicate that the pilot Achara system can be sustained by the DoF, provided that practical training continues and that an agent is available for collecting data from the Bartskhana and Qobuleti sites.

Initially, data collection will aim at an accuracy level of 90 percent, which is achievable if sampling is conducted according to the standard modalities provided by FAO. A set of guidelines has been prepared and printed on the back of each data collection form. The same system can be applied to the industrial vessels that operate from Batumi. Basic variables such as production by species, trip duration and prices can be obtained directly from the landings of licensed fishing. In this manner the entire statistical programme will be integrated and capable of providing estimates on catch, effort and values at any level of detail.

Inland capture fisheries appear to represent a sector that, from the statistical viewpoint, is less important in volume terms than marine fisheries, and would thus justify only a limited investment in data collection. It would possibly suffice to consolidate the existing typology of the sector and make use of some kind of empirical knowledge for the preparation of annual reports on production.

Aquaculture statistics are still fairly unknown, although aquaculture typology is registered at regional offices operating under the aegis of the Ministry of Environment Protection and Natural Resources. A module for gathering information with the view of establishing a sampling frame for future data collection operations has been prepared. Assuming that a reasonably accurate register of farming units could be established, it would then be a matter of implementing the data collection and computer software instruments already made available through the FAO project to the DoF. Data collection should be much less intensive than that required for marine capture fisheries.

The experience gained from the Achara pilot system over the course of 2005 will allow the government to extend the system to the entire marine zone.

3.15 CREDIT AND INVESTMENT IN FISHERIES

There is a two-tier banking system in Georgia: the National Bank of Georgia (NBG) and commercial banks (CBs). The NBG has a supervising function over the CBs. CBs that do not meet the requirements established by the NBG lose their banking licence. This has led to a reduction in CBs from 47 to 12 in recent years.

At present the CBs provide institutional credit with an average interest rate between 18 and 24 percent. Most institutional credit currently given has a duration of between one and five years. For long-term credit a guarantee is generally required.

The lack of flexibility in the Georgian banking system together with the relatively high interest rate of bank loans constrain local entrepreneurs from investing in their means of production, and thus present an obstacle for development of the fishery sector. Credit is needed not only for investment in fishing vessels and gear, fish ponds, fish handling, processing and marketing facilities and services, but also – or even more so – for the smooth day-to-day capture, culture, handling, processing and distribution of fish. Fisheries equipment and facilities have to be replaced or repaired, salary advances have to be provided for crew members and labourers, working capital requirements have to be met and rarely does liquidity generated by previous earnings match current expenditure.[5]

There are no institutions that provide flexible credits to meet the needs of small- and medium-scale fishery and aquaculture producers in Georgia at present. For the rehabilitation of the fishery sector it is important that there be access to credit for those willing to invest in the sector.

As institutional credit is not accessible at the moment for most entrepreneurs in the fishery sector, they will have to rely on non-institutional sources of credit from fish merchants, professional moneylenders and boat owners. In general, the amounts of credit obtainable from these sources are fairly limited and mainly intended for working capital requirements and for short-term finance. In addition, most of these non-institutional credit arrangements have a number of disadvantages, such as high costs and unfavourable terms and conditions attached to loans.

As institutional credit is neither available nor accessible in the short term, and as non-institutional microcredit is generally only suitable for small-scale operations in the harvesting, processing and marketing areas, urgent attention from the government to this constraint to development is required. A fishery sector that is not subject to any special line of credit in the country is extremely precarious.

3.16 INTERNATIONAL ASSISTANCE IN FISHERIES DEVELOPMENT

As already mentioned, the fishery sector in Georgia was not considered a priority sector in the national economic development of the country in the early 1990s. This was also reflected by the lack of international assistance to the sector in that period. Towards the

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[5] See also FAO Fisheries Technical Paper No. 312. *Fisheries credit programmes and revolving loan funds: case studies* at http://www.fao.org/docrep/003/T0274E/T0274E00.htm/

end of the millennium a few internationally funded projects on fishery sector activities were formulated and initiated.

In Batumi MEFRI received support from the EU/TACIS Programme over the period 1998–2000 to carry out specific tasks defined under the Black Sea Environmental Programme. Within the research institute the following groups were established, trained and equipped.

- Wetlands Monitoring Team
- Marine Monitoring Team
- Geographic Information Systems Team
- Eco Education Team
- Black Sea Salmon Team

More information can be found at http://mefri.iatp.org.ge/index.html/

Since 1998 the World Bank and the Global Environmental Facility (GEF) have been funding the Integrated Coastal Management Project in Georgia. This project aims at institutional strengthening for a better management of the coastal resources of the Black Sea. In order to achieve economic development along the coastal areas, the project seeks to integrate environmental planning and management effectively through the development, testing and evaluation of different methods.

To this end, the project includes five components. The first is the establishment of an institutional and legal framework, thus facilitating intersectoral planning and participation. With the creation of agencies and other groups, in addition to drafting legislation, this component will support coastal management through training and mass media awareness. Second, the protection and management of forests and natural habitats will be supported for the conservation of biodiversity. A third component is the establishment of a coastal environment quality monitoring and information system, setting standards at major sources of pollution. The fourth component addresses the evaluation of coastal erosion, towards integrated water management. Finally, the development of a national oil spill contingency plan and marine oil pollution control plan will provide support for a Regional Black Sea Strategy Action Plan. One of the components is also dealing with the Kolkheti National Park, a water area on which a number of coastal fishing communities are dependent for their livelihoods. Detailed information on the various project components can be found at http://www.iczm.org.ge/entry.html/

In these first years of the twenty-first century the Government of Georgia has asked FAO for technical assistance. This assistance is being provided under Technical Cooperation Programme Project TCP/GEO/2904(A): "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation". The two-year project (2004–2005) aims to increase the effectiveness and efficiency of the DoF in leading and assisting the rehabilitation of the fishery sector in Georgia in a structured and responsible manner, with specific emphasis on the achievement of food security and alleviation of poverty, where the fishery sector could play a more prominent role.

The specific objectives of the project are to:

- review existing national fisheries legislation and draft appropriate amendments to the draft law on fisheries in order to facilitate its finalization and governmental approval;

- produce a national master plan for fisheries development, in consultation with the main stakeholders in the Georgian fishery sector, as part of the general fisheries policy framework;
- develop data collection and evaluation systems as well as information retrieval to be used as tools for fisheries management and planning.

The present *Review of the current status of fisheries resources and utilization in Georgia* has also been produced with technical and financial support from this FAO project. Additional information can be obtained from http://www.fao.org/world/regional/REU/Content/FProgramme/index_en.htm/

Preliminary contacts by the staff of the project and the FAO Representation with a number of active international donors have shown the willingness of several of these donors to include fisheries and aquaculture development and management actions among their programmes. However, most of the donor agencies face difficulties in identifying the fishery activities to be supported by them because of their lack of fishery expertise and the weakness of the fishery institutions to advise them on the needs and opportunities for development of the fishery sector. The Master Plan for Fishery Sector Development in Georgia, 2005-2020, currently being developed should help potential donors to address national priorities for sectoral development.

4. Diagnosis

Chapter 3 described the current status of fisheries in Georgia, without giving a detailed analysis of the situation. It is clear however that there are a number of hurdles to be overcome and issues to be addressed if the fishery sector is to develop in an environmentally and socio-economically sustainable manner.

There are various methods that can be used to diagnose the current situation. One of the most commonly used to analyse a situation, create understanding and assist future decision-making processes in a simple manner is the SWOT (strengths, weaknesses, opportunities and threats) analysis. This has the advantage that it addresses both internal and external factors that support or constrain development. The analysis of the internal and external sectoral environment provides useful information for the preparation of the Master Plan for Fishery Sector Development in Georgia, 2005–2020.

SWOT analysis

	Internal	External
Positive	Strengths	Opportunities
Negative	Weaknesses	Threats

In this SWOT analysis the current situation in the Georgian fishery sector is diagnosed as a sector, considering its natural, human, institutional and financial resources as internal factors.

4.1 STRENGTHS

- Georgian hydrobiological marine and inland water resources are generally underexploited or moderately exploited. For example, a large part of the anchovy resources in Georgian waters has not been utilized or harvested in recent years.

- The marine fishing fleet is relatively small and overcapacity of the fleet, as is the case in many countries, does not exist.
- Georgia has environmental conditions suitable for the development of aquaculture, such as many rivers and reservoirs with good water quality.
- The current fishery administration, the DoF of the MoA, is small and as such does not require many financial resources from the Government of Georgia.
- The majority of Georgian marine fishers are organized in fishers' associations and cooperatives, which makes them relatively easy to reach for government services and incorporation in government decision-making processes.

4.2 WEAKNESSES

- There is no national fishery sector policy or regulatory framework to assist the sector in its sustainable development.
- The division of responsibilities between various governmental agencies with regard to fishery-related matters is not clear. This leads to non-management of the sector. The Government needs to decide as soon as possible which ministry will be responsible for management of the fishery sector. It would be most logical for either the MoA or the Ministry of Environment Protection and Natural Resources to have a mandate for fishery management.
- Financial means in the MoA are lacking to ensure that the DoF is the centre of excellence it should be, equipped with highly qualified staff and modern means of communication and transport.
- The fishery sector research institutes do not have the financial capacity to undertake the necessary research to assess fisheries resources and support the development and monitoring of fisheries management regimes.
- The marine fishing fleet, fishing ports and fish landing facilities are old, badly equipped and lack proper safety (e.g. for sailors at sea and food safety) and quality measures.
- The fish processing industry for human consumption has been virtually destroyed.
- Most hatchery facilities for restocking of inland waters and aquaculture ponds with fish have been destroyed and others are in a very bad state.
- No good-quality fish feed for aquaculture is being produced in Georgia.
- There is a lack of restocking of inland waterbodies and of monitoring and control of IUU fishing in both inland and marine waters.
- Many of the inland waterbodies are not very productive during part of the year, as they are covered with ice and water temperatures are low in winter, which means that the fish do not consume much feed and have little growth during that period.
- The collection of fishery statistics is not coordinated at present and the responsibility for data collection and analysis has not been determined, which affect decision-making in a negative manner.

4.3 OPPORTUNITIES

- The fishery sector is now being prioritized by the Government and, therefore, the sector should be included in future phases of the Economic Development and Poverty Reduction Programme of Georgia and obtain funding accordingly.

- With the participatory preparation of the Master Plan for Fishery Sector Development in Georgia, 2005-2020, the Government has initiated discussions with all relevant stakeholders. Increased stakeholder collaboration and involvement in decision-making processes seem possible with only limited efforts.
- The Master Plan and the new fisheries law will (once approved by the Government) provide a basis for sustainable development of the sector in the coming years and will allow international donors to support the Government in its efforts towards sustainable development.
- Georgia has ratified a number of international agreements that relate to fisheries and their resources and utilization. Under these agreements there are generally mechanisms and funds available that support countries in their implementation.
- Uniting international and regional fishery bodies will increase Georgian access to information and collaboration on fisheries resources, research, management, education, techniques, marketing and trade.
- The hydrochemical and biological conditions of Lake Paliastomi provide possibilities for stocking the lake with common and Chinese carp, foreseeing an increase in the annual production.
- Prices paid for fish and fishery products on the domestic market are relatively high compared with those in Europe and neighbouring central Asian countries.
- Demand for low-priced fishery products on the domestic market is high, which may be regarded as an incentive to develop the capture fisheries sector.
- As there is currently no fisheries management system in place, it is possible to adapt modern cost-effective management systems, taking advantage of the lessons learned by other countries and building on up-to-date information on comanagement schemes and programmes.
- Anchovy and other small pelagics that are abundant in Georgian marine waters can be used for human consumption and for the production of fishmeal.
- Feasibility studies on the fishery fleet (both large- and small-scale) could assist the sector in modernizing the fleet, including facilities on board such as navigation, gears, safety and product quality maintenance.

4.4 THREATS

- If the new fisheries law is not approved by the Government and no decision is taken on the establishment of a national fisheries management body, it will be extremely detrimental for sectoral development. Urgent action and commitment are required.
- The Turkish fleet is currently fishing for anchovy and other pelagics in Georgian waters. Unless the Government of Georgia makes firm agreements with the neighbouring Black Sea coastal states and ensures enforcement of these agreements, IUU fishing in Georgian waters by foreign fleets will continue.
- As long as the national financial institutions that provide formal credit do not consider the fishery sector and its needs properly, investment levels in fishing vessels, fish processing and related activities will remain low.
- Oil spillage, pesticides and other wastes that enter coastal waters have created pollution such that water quality in some coastal areas of the Georgian Black Sea is not good. Consequently, the environment is not suitable for fish reproduction and the fish caught in these waters are detrimental to human health.

- The few formal education and practical training/capacity building and extension institutions that address the needs of the fishery sector limit the number of people that can be trained in fisheries, which will hinder sectoral development in the near future.

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ANNEX 1
Commercial fisheries production in the Black Sea coastal zone of Georgia, 1991–2003

Species/years	1991	1992	1993	1994	1995	1996	1997*	1998	1999	2000	2001	2002	2003
Anchovy	7 037	8 108	2 973	926.8	1 401	1 560	4 065	2 161	6 372.6	7 527.5	8 751.5	6 070.2	12 242.9
Sprats	2 942	830	250	308	292	185.2	–	46	43	70	73.3	136	719.5
Black Sea whiting	82	70	172	187.4	146.4	223	–	56	36	45.5	26	29.1	710
Spiny dogfish	20	6.6	143	22.4	26	70.8	–	–	–	0.2	0.5	2.9	9.2
Scad, red mullet, mullet, pickerel and others	2	6	7	27	7	25.3	–	–	–	1.7	1.7	55	7.7
Total fish	10 083	9 022.6	3 545	1 472.6	1 872.4	2 064.3	4 065	2 263	6 451.5	7 644.7	8 853.0	6 293.2	13 689.4
Molluscs and rapana	–	–	–	–	700	711	–	–	–	186.7	457.9	1 479.7	764.6
Total marine fisheries production	**10 083**	**9 022.6**	**3 545**	**1 472.6**	**2 572.4**	**2 775.3**	**4 065**	**2 263**	**6 451.5**	**7 831.4**	**9 310.8**	**7 772.9**	**1 4454**

* Catches of Ukrainian and Turkish fleets in the Georgian Black Sea coastal zone waters have been included from 1997.

ANNEX 2
Catch of main species in Georgian waters by fleet, 2001–2003

Years	2001						2002							2003						
Species/ fleet	Ukrainian fleet	Turkish fleet	Georgian fleet			Total	Ukrainian fleet	Turkish fleet	Georgian fleet				Total	Ukrainian fleet	Turkish fleet	Georgian fleet				Total
			SMKK	AT	Meb				SMKK	AT	Meb	Delfini				SMKK	AT	Meb	Del	
1. Black Sea anchovy	5401	1 928	798	450.5	174	8 751.5	4 823	222.2	613	347	24	41	6 070.2	1 128	4 235	6 229	144.9	–	506	12 242.9
2. Black Sea sprats	–	–	–	73.3	–	73.3				136	–	–	136			687	32.5		–	719.5
3. Black Sea whiting	–	–	–	26	–	26				29.1	–	–	29.1			680	25.1		5	710
4. Spiny dogfish	–	–	–	0.5	–	0.5				2.9	–	–	2.9			–	4.7		4.5	9.2
5. Other fish species	–	–	–	1.5	0.2	1.7				55		–	55			5	2.7			7.7
Total fish	5401	1 928	798	551.8	174.2	8 853	4 823			570	24	41	6 293.2	1 128	4 235	7 601	209.9	–	515.5	13 689.4
Rapana	–	–	–	22.9	434.9	457.8				1 240	239	–	1 479.7		–	360	28.9	375.7	–	764.6
Total marine production	**5401**	**1 928**	**798**	**780.8**	**609.1**	**9 310.8**	**4 823**	**222.2**	**613**	**1810**	**263**	**41**	**7 772.9**	**1 128**	**4 235**	**7 961**	**238.8**	**375.7**	**515.5**	**14 454**

SMKK = Georgian Fishers' Cooperative Union, Poti; AT = Adjartevzi Ltd, Batumi; Meb = Mebaduri Fishers' Cooperative, Batumi; and Delfini = Delfini Ltd, 2002.

ANNEX 3
Catch of anchovy in Georgian territorial waters by fleet, seasons 1997/1998 to 2003/2004

Seasons	Georgia		Ukraine		Turkey		Total	
	Number of seiners	Catch (*tonnes*)	Number of seiners	Catch (*tonnes*)	Number of seiners	Catch (*tonnes*)	Number of seiners	Catch (*tonnes*)
1997/98	28	907	48, among them 4 SRTMs*	1 547	–	–	76	2 454
1998/99	24	419	14, among them 1 SRTM*	1 726	4	2 057	42	4 202
1999/00	19	1 475	12, among them 1 SRTM*	6 243	3	259	34	7 977
2000/01	26, among them 2 *motofeluga*	1 219	6	4 632	13	1 982	45	7 833
2001/02	36	1 171	12	3 862	16	30	64	5 063
2002/03	36	964.7	12	5 855	16	380	64	7 199.7
2003/04	27	1 131.3	9, among them 2 SRTMs*	5 193	15	3 119.5	51	9 443.8

* SRTM = Ocean fishing seiner.

ANNEX 4
Composition of anchovy age groups, 1997/98–2003/04

No.	Seasons	Age groups					%
		0+	1+	2+	3+	4+	
1	1997/98	51.5	33.5	7.6	6.5	0.8	99.9
2	1998/99	34.4	33.5	29.7	2.0	0.2	99.9
3	1999/00	46.3	36.2	12.6	4.3	0.6	99.9
4	2000/01	40.7	45.6	13.3	0.5	–	100
5	2001/02	75.87	10.2	11.6	2.3	–	100
6	2002/03	14.1	39.8	45.8	0.4	–	100
7	2003/04	56.5	22.8	18.4	2.3	–	100

ANNEX 5
Aquaculture farms in Georgia by region, surface area species cultured and production, 2004

No.	Regions	Farms and hatcheries	Total size (ha)	Species	Total production (tonnes)
1	Dusheti	3 farms	70	*Cyprinus carpio* 80%	15
				Hypophthalmichthys molitrix 10%	
				Ctenopharyngodon idella 5%	
				Varicorhinus capoeta 5%	
2	Borjomi	2 farms	15	*Cyprinus carpio* 70%	2
				Hypophthalmichthys molitrix 15%	
				Varicorhinus capoeta 5%	
				Carassius carassius 5%	
3	Sachkhere	3 farms	12	*Cyprinus carpio* 85%	1.5
				Hypophthalmichthys molitrix 10%	
				Varicorhinus capoeta 5%	
4	Chokhatauri	1 farm	8	*Cyprinus carpio* 75%	2
				Hypophthalmichthys molitrix 20%	
				Ctenopharyngodon idella 5%	
5	Bagdati	6 farms	14	*Cyprinus carpio* 90%	2.5
				Hypophthalmichthys molitrix 5%	
				Ctenopharyngodon idella 5%	
6	Senaki	5 farms 2 hatcheries	465	*Cyprinus carpio* 70%	85
				Hypophthalmichthys molitrix 15%	
				Ctenopharyngodon idella 10%	
				Carassius carassius 5%	
7	Qareli	5 farms	28.5	*Cyprinus carpio* 80%	3
				Hypophthalmichthys molitrix 5%	
				Ctenopharyngodon idella 5%	
				Carassius carassius 10%	
8	Tkibuli	1 farm	8	*Cyprinus carpio* 80%	4
				Hypophthalmichthys molitrix 15%	
				Ctenopharyngodon idella 5%	
9	Chiatura	4 farms	35	*Cyprinus carpio* 60%	6
				Varicorhinus capoeta 35%	
				Carassius carassius 5%	

10	Terjola	1 farm	12	*Cyprinus carpio* 60% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 5% *Carassius carassius* 2%	15
11	Vani	4 farms	27	*Cyprinus carpio* 65% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 10% *Carassius carassius* 10%	25
12	Abasha	1 farm	180	*Cyprinus carpio* 70% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 5% *Carassius carassius* 10%	35
13	Sagarejo	5 farms 1 hatchery	340	*Cyprinus carpio* 65% *Hypophthalmichthys molitrix* 25% *Ctenopharyngodon idella* 10%	40
14	Kvareli	3 farms	25	*Cyprinus carpio* 55% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 20% *Carassius carassius* 10%	3.5
15	Chkhorotsku	7 farms	35	*Cyprinus carpio* 75% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 10%	4.5
16	Ozurgeti	2 farms	110	*Cyprinus carpio* 75% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 10%	45
17	Telavi	1 farm	70	*Cyprinus carpio* 75% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 10%	35
18	Akhmeta	1 farm 2 hatcheries	180	*Cyprinus carpio* 70% *Hypophthalmichthys molitrix* 20% *Ctenopharyngodon idella* 10%	45
19	Tsnori	5 farms 1 hatchery	640	*Cyprinus carpio* 65% *Hypophthalmichthys molitrix* 20% *Ctenopharyngodon idella* 10% *Silurus glanis* 5%	250
20	Lagodekhi	2 farms	265	*Cyprinus carpio* 65% *Hypophthalmichthys molitrix* 25% *Ctenopharyngodon idella* 10% *Silurus glanis* 5%	90

21	Gordjaani	3 farms	140	*Cyprinus carpio* 60% *Hypophthalmichthys molitrix* 20% *Ctenopharyngodon idella* 20%	50
22	Dedoflistskaro	2 farms	53	*Cyprinus carpio* 75% *Hypophthalmichthys molitrix* 20% *Ctenopharyngodon idella* 5%	10
23	Marneuli	5 farms	127	*Cyprinus carpio* 80% *Hypophthalmichthys molitrix* 10% *Ctenopharyngodon idella* 8% *Varicorhinus capoeta* 2%	25
24	Gori	3 farms	140	*Cyprinus carpio* 80% *Hypophthalmichthys molitrix* 15% *Ctenopharyngodon idella* 5%	30
25	Kaspi	3 farms	27	*Cyprinus carpio* 85% *Hypophthalmichthys molitrix* 10% *Ctenopharyngodon idella* 5%	4
26	Lanchkhuti	2 farms	80	*Cyprinus carpio* 85% *Hypophthalmichthys molitrix* 10% *Ctenopharyngodon idella* 5%	20
27	Tskaltubo	1 farm	45	*Cyprinus carpio* 90% *Hypophthalmichthys molitrix* 5% *Ctenopharyngodon idella* 5%	15
Total		**81 farms** **6 hatcheries**	**3 161.5**		**819**

ANNEX 6
Imports of fish and fishery products, 1999–2003

Imports (*tonnes*)	1999	2000	2001	2002	2003
Live fish	–	0.0	0.7	0.6	–
Fresh or quick-frozen fish	378.3	154.7	30.5	52.3	–
Frozen fish	3 707.1	2 310.1	2 428.7	3 312.6	4681.7
Different parts of fish	7.7	1.7	1.0	0.2	0.4
Dried, salted and fish in brine	83.9	75.3	135.7	82.7	155.4
Total finfish	*4 177.0*	*2 541.8*	*2 596.6*	*3 448.4*	*4 837.5*
Crustaceans	2.1	0.5	0.9	0.3	1.0
Molluscs/other aquatic invertebrates	1.4	13.3	19.1	0.2	0.3
Total fishery products	**4 180.5**	**2 555.6**	**2 616.6**	**3 448.9**	**4 838.7**

Imports (*US$'000*)	1999	2000	2001	2002	2003
Fresh or quick-frozen fish	122.6	64.0	6.6	18.1	–
Frozen fish	1 008.9	1 109.2	971.9	1 264.2	1 930.7
Different parts of fish	10.2	11.8	6.5	2.0	2.3
Dried, salted and fish in brine	34.4	31.3	71.6	45.6	68.1
Total finfish	*1 176.1*	*1 218.4*	*1 058.4*	*1 331.6*	*2 001.1*
Crustaceans	9.0	3.8	14.1	1.7	8.5
Molluscs/other aquatic invertebrates	2.4	7.4	12.9	0.8	4.5
Total fishery products	**1 185.1**	**1 229.6**	**1 085.5**	**1 334.2**	**2 014.2**

ANNEX 7
Exports of fish and fishery products, 1999–2003

Exports (*tonnes*)	1999	2000	2001	2002	2003
Live fish	2 455.6	384.2	2 644.1	72.8	7 182.6
Fresh or quick-frozen fish	58.4	332.0	312.5	193.7	662.8
Frozen fish	122.4	114.5	10.0	–	–
Different parts of fish	–	–	–	79.3	43.0
Total finfish	2 637.4	*830.7*	2 966.6	*339.8*	*7 778.4*
Molluscs/other aquatic invertebrates	–	48.9	77.8	80.0	74.1
Total fishery products	**2 637.4**	**879.6**	**3 044.4**	**422.6**	**7 852.5**

Exports *(US$'000)*	1999	2000	2001	2002	2003
Live fish	191.1	35.1	209.6	6.8	214.2
Fresh or quick-frozen fish	6.9	51.4	62.2	25.1	64.2
Frozen fish	30.1	20.9	1.5	–	–
Different parts of fish	–	–	–	9.1	6.5
Total finfish	*230.1*	*107.4*	*273.3*	*41.2*	*284.9*
Molluscs/other aquatic invertebrates	–	28.2	69.4	73.8	64.0
Total fishery products	**230.1**	**135.6**	**342.7**	**115.0**	**348.9**

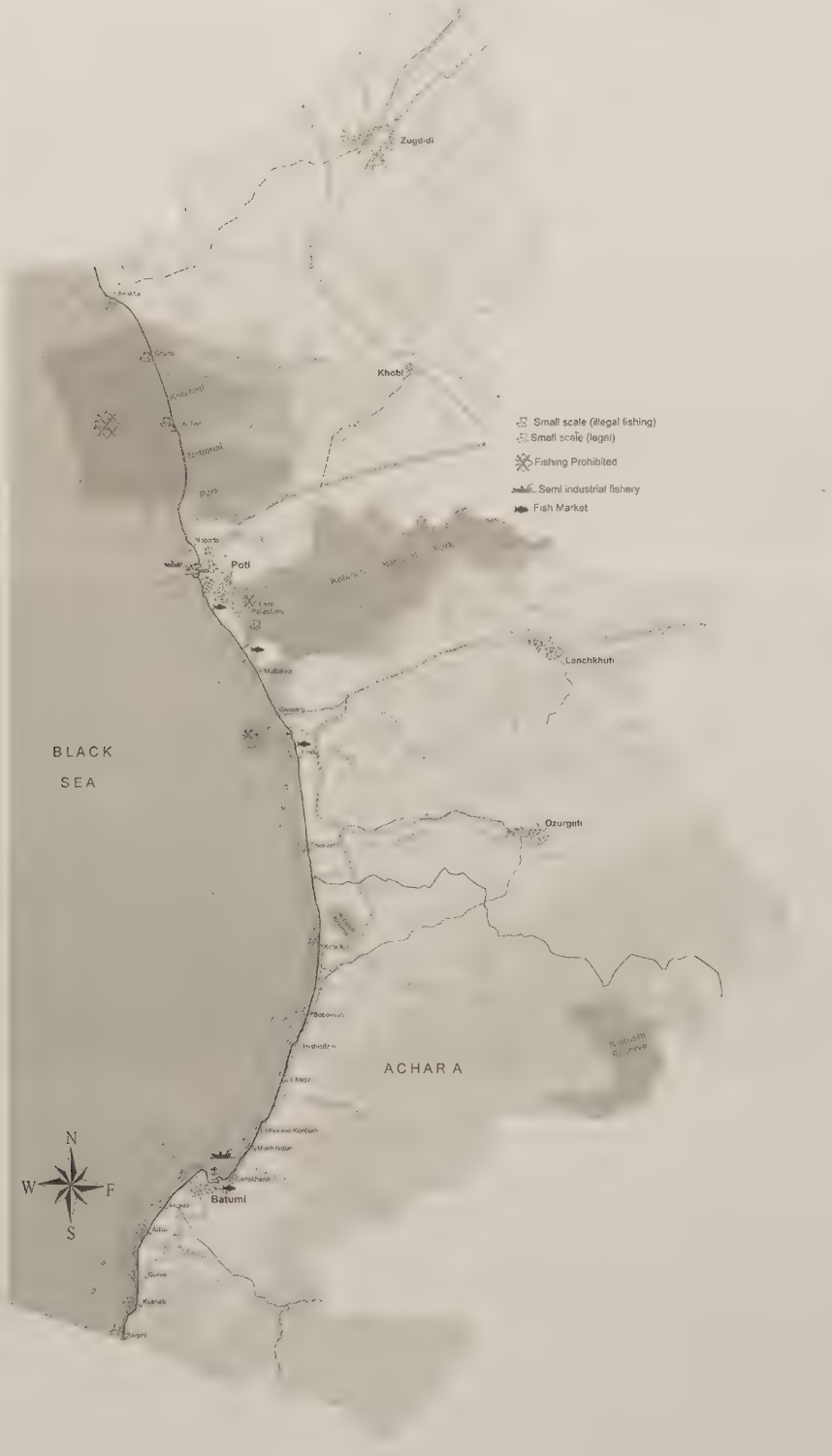
ANNEX 8
Imports and exports of fishery products in Batumi and Poti ports, 1999–2004

Batumi port	Imports		Exports	
	US$'000	Tonnes	US$'000	Tonnes
1999	241.2	1 206.1	–	–
2000	–	–	10.6	193.0
2001	38.2	109.0	39.8	290.7
2002	81.4	232.7	3.2	40.0
2003	80.4	192.3	150.1	6 064.0
2004	23.3	41.0	6.5	245.3

Poti port	Imports		Exports	
	US$'000	Tonnes	US$'000	Tonnes
1999	288.7	827.8	224.4	2 634.6
2000	362.9	797.4	100.0	666.0
2001	242.5	520.7	263.1	2 703.1
2002	450.0	1 095.3	36.0	299.9
2003	789.4	1 735.6	152.5	1 732.0
2004	1 603.2	3 052.7	147.7	2 488.5

ANNEX 9

Marine fisheries of Georgia



ANNEX 10

Data collection places

MASTER PLAN FOR FISHERY SECTOR DEVELOPMENT IN GEORGIA

2005–2020

Preparation of this document

The Master Plan for Fishery Sector Development in Georgia, 2005–2020, provides an outline for the long-term development of the sector. The Plan was prepared by the Department of Fisheries of the Ministry of Agriculture of Georgia together with the representatives of many fishery sector stakeholder groups, with support from FAO project TCP/GEO/2904(A). This project aimed at strengthening the capacity of the Department of Fisheries to support fishery sector rehabilitation in Georgia.

The Plan was the subject of an intensive process of consultation with all relevant fishery sector stakeholders and will be submitted by the Minister of Agriculture to Parliament for approval. Consequently, the document should be considered a framework of policy guidance, prepared by a Master Planning Drafting Team with inputs from national workshops held in Batumi on 19 August 2004 and in Tbilisi on 11 and 18 February 2005. Finalization of the Master Plan took place in Tbilisi from 15 to16 June 2005 at a large stakeholder conference. Additional observations on the drafts were received from relevant officials and experts involved in fisheries management and development in Georgia and from ministries and institutions with a stake in fisheries and/or aquaculture in the country.

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1. Introduction

Georgia became independent from the former Soviet Union in April 1991. The country is endowed with a coastline of 310 km and thousands of hectares of ponds, lakes, rivers and reservoirs suitable for fishery activities. The fishery sector consists of three main subsectors: marine fisheries in the Black Sea, inland capture fisheries and aquaculture. Before 1990, the total annual production of fish in these areas was over 60 000 tonnes. Under a centrally planned economy, the Government of Georgia provided investment funds for the industrial development of the sector. The main objective of the fishery sector was to harvest large quantities of fish to ensure a protein supply for the population and generate foreign exchange earnings through exports, with little regard for the cost of fisheries operations and aquaculture activities.

The transition from a centrally planned economy to a market one caused the virtual collapse of Georgian fisheries. The difficulties related to the transition were aggravated by the mentality inherited from the centrally planned economy and the psychological stress and uncertainty that accompanied the destruction of that system. These factors affected many sectors in Georgia including that of fisheries, the fishing fleet, processing infrastructure and the market for fishery products.

At present, the Ministry of Agriculture is responsible for the formulation and implementation of national policies for the agrofood sector. The major objectives of the Ministry are to promote sustainable development of the sector, enhance its income, achieve food security and reduce rural poverty. The Ministry is also responsible for fisheries production and marine resources management. For these responsibilities a separate administrative unit, the Department of Fisheries, was established. Together with the Ministry of Agriculture, other government agencies are deeply involved in fishery activities, such as the Ministry of Environment Protection and Natural Resources, which allocates fishing quotas and issues licences to fishing companies and individuals; the Ministry of Economic Development, which has a company responsible for most of the fisheries on large lakes in the country and a Department of Statistics, responsible for gathering, processing and disseminating fishery statistics; and the Ministry of the Interior, which has legal responsibility for the monitoring and control of marine fishery activities.

The Ministry of Agriculture has recognized that in recent years the fishery sector has not received the government attention it deserves. The situation is slowly changing; the Department of Fisheries of the Ministry of Agriculture was allocated additional funds in February 2005 to increase its staff and improve its operational capacity. However, no government entity with responsibilities in the field of fisheries management and development in Georgia will be able to achieve its objectives without a law that defines its mandate and a well-structured and realistic plan that details the specific long-term objectives of the sector and the pertinent steps to be taken by public and private entities in order to achieve them.

WHY DO WE NEED A MASTER PLAN?

Since 1991 the Georgian fishery sector has not made a great deal of progress. Catches have decreased, the fleet has deteriorated and export earnings from fishery products and relative employment have slowly diminished. The transition from a centrally led communist regime to capitalism did not go as smoothly as in other sectors. Overall economic decline in the 1990s contributed to a deterioration in the fishery sector, since demand for fishery products decreased with falling household incomes. However, it seems that the lowest point has been reached and from now on things can only get better; the recovery of the sector matches that of Georgia's national economic recovery.

The fishery sector has virtually had to start from the beginning, and in its recovery has had to deal with a reforming national economy, which is heading towards an internationally linked market one. It is therefore important that the sector develops in an economically viable and environmentally sustainable way. Government reforms have reached a critical stage; the success of these measures will depend on their coherence, comprehensiveness, transparency and socio-economic viability.

In the coming years the Ministry of Agriculture, like private entrepreneurs, needs to show that it is performing well. The Ministry's achievements and the impact of its decisions should be clear to society. In order for society to pronounce judgement on the government and the Ministry of Agriculture in particular, measurable quantitative and qualitative targets that are timely, achievable, suitable and justified need to be set. These targets or objectives are generally written into a plan where not only the rights and obligations of the Ministry are detailed, but also those of the private sector and other stakeholders involved in fisheries, showing the synergy and coherence between them. Such a plan, where the government and the private sector collaborate, may be considered a kind of contract between the two. Plans can be short- or longer-term, fairly general or detailed, and include or exclude budget resource issues. This brings us to the Master Plan.

WHAT IS A MASTER PLAN?

A Master Plan for fishery sector development encompasses the objectives and recommendations of the government for the sustainable development of the sector. It provides a long-term outline for sectoral development, including all subsectors (e.g. aquaculture, marine capture fisheries, inland capture fisheries, fish processing). The Master Plan provides guidance and direction for the sector, a vision for the future and clearly defined strategic objectives. The Master Plan describes *what* should be achieved within the given time frame and will be followed by an Action Plan that details *how* the objectives are to be reached. This Action Plan can be found in a separate document after the Master Plan.

THE PLANNING PROCESS

The Master Plan for fishery sector development in Georgia was formulated in a participatory manner with key sectoral stakeholders, including the Department of Fisheries, Ministry of Agriculture, Ministry of Environment Protection and Natural Resources, Ministry of Finance, Ministry of Economic Development, Ministry of the Interior, Ministry of Foreign Affairs, Ministry of Agriculture of Adchara, Parliament of Georgia, Parliamentary Committee on Environment Protection and Natural Resources, Marine Authority of Georgia, Maritime Transport Administration of Georgia, Department of Statistics, Fisher's Association of Poti, Georgian Union for the Rehabilitation and

Restocking of Ichthyofauna (GURRI), Coastguard of Georgia, fishing vessel owners, Gagra and Sukhumi fishery cooperatives, Marine Ecology and Fisheries Research Institute (MEFRI), a United States Agency for International Development (USAID) project, Integrated Coastal Zone Management (ICZM) project and a large number of fishers and aquaculturists. As such, it includes the visions and aspirations of those involved in sectoral development.

The formulation process of the Master Plan started with a fishery sector review in mid-2004. This review aimed to provide sufficient information and analysis to enable the formulation of the Master Plan. While the review did not cover the official government perspective, the Master Plan does include it and therefore represents the commitment by the Government of Georgia to the development of the fishery sector and to the pertinent objectives outlined in the Master Plan.

The national policy framework generally consists of a set of policy measures, including legislation, regulations, economic instruments and investment. Policies can be directed towards the macro level (e.g. promoting good governance; enhancing political stability; fiscal, legal and investment policies; fighting corruption; infrastructural policies; privatization policies; trade and liberalization policies; and poverty-reducing policies), towards the meso or sectoral level, or towards the micro level (e.g. grants, subsidies, technical and extension support, credit, inputs and taxation). A Master Plan is an important part of a sectoral-level policy framework.

In the planning process the Master Plan is considered a holistic plan that details strategic objectives and gives guidance for achieving these objectives. In 2004 the Ministry of Agriculture embarked on the development of a "Strategy for the Sustainable Development of Agriculture and the Food Security of Georgia". This Master Plan contains clear linkages with the strategy, such as the "factors that promote development in the agrofood sector", which are basically similar to those for the fishery sector. The Master Plan for Fishery Sector Development in Georgia, 2005–2020, is more specific in scope than the above-mentioned national strategy, since it includes quantitative objectives wherever possible and is limited to the fishery sector and its linkages with other sectors. It forms the basis for the development of (future) practical and operational strategies, programmes and projects.

The planning process started in August 2004 with the Workshop on Fisheries Management and Development which, in itself, was very useful for the fishery sector as it managed to bring together representatives from fishery and aquaculture stakeholder groups with government officials to identify commonly considered constraints to development and opportunities for the sector. A joint effort was consequently made in which measures were proposed and target objectives were set for the future.

WHAT IS THE PURPOSE OF THE MASTER PLAN?

The Master Plan for Fishery Sector Development in Georgia, 2005–2020 (including the planning process), has three overriding purposes.

1. Support and guide the long-term fishery sector development process.
2. Mobilize resources for sectoral development.
3. Assist the Ministry of Agriculture in increasing its effectiveness in, and focus and impact on, the fishery sector.

This master planning document consists of various chapters. The following chapter provides a summary of the Review of the Current Status of Fisheries Resources and Utilization in Georgia, followed by a short overview of national development objectives that are also relevant for the fishery sector (Chapter 3). Chapters 4 to 14 contain the actual Master Plan for Fishery Sector Development in Georgia, 2005–2020. These chapters subsequently address the principles and vision for the sector, the time horizon, monitoring and review of the Master Plan, overall objectives for development of the sector, the responsible use of aquatic living resources, institutional strengthening and capacity building, responsible development of marine capture fisheries, inland fisheries, aquaculture, privatization, investment and enterprise development, and post-harvest activities and trade.

2. Overview of the fishery sector

In 2004 the Department of Fisheries of the Ministry of Agriculture carried out a study on the current status of fishery resources and utilization in Georgia. The Department was supported in this study by the Marine Ecology and Fisheries Research Institute (MEFRI) and the Food and Agriculture Organization of the United Nations (FAO). The following is a short summary of the findings.

Georgia is rich in hydrobiological resources. The Black Sea and the numerous rivers, reservoirs and lakes make the country suitable for marine and inland capture fisheries and aquaculture activities. The abundance of pelagic species such as anchovy and sprats in the Black Sea exclusive economic zone (EEZ) of Georgia provides good opportunities for marine fisheries development. In 2003 total catches of anchovy in the Georgian EEZ reached 12 200 tonnes while total marine catch in the same area was estimated at 14 450 tonnes. As the total catch in 2001 and 2002 was much lower, at 9 300 and 7 770 tonnes respectively, it appears that the marine capture sector is developing rapidly. It should be noted however that more than one-third of the total catch in 2003 was achieved by foreign fleets from Ukraine and Turkey. Compared with these two countries the catch in the Black Sea in recent years by the Georgian fleet is of limited importance.

Georgia's marine fishing fleet is small. It consists of 36 medium-sized seiners (110–225 HP) which were all constructed during the Soviet period. No significant modernization of the fleet has taken place since independence in 1991 and many of the vessels are in a bad condition because of lack of funds for maintenance and repair. There are also an estimated 324 small-scale fishing vessels involved in coastal capture fishery activities; these are equipped with seine nets, gillnets, bottom lines, cast nets and fishing rods.

The catch in inland waters in 2004 increased slightly compared with 2003. In 2003 inland capture fisheries production was estimated at 388 tonnes, which increased in 2004 to around 400 tonnes. The productivity of most of the lakes and reservoirs is poor, since many of these have not been restocked with fingerlings over the last decade. Nevertheless, some lakes provide favourable conditions for increasing the production of trout and carp in particular. The area of the ponds, lakes and reservoirs currently being restocked by six hatcheries and 81 farms with fingerlings is estimated to be in the order of 3 200 ha. Total culture-based capture fisheries production may reach up to 1 000 tonnes of fish annually (among which an estimated 600 tonnes of common carp and 250 tonnes of grass carp). Total production of the 35 identified trout farms in the country was estimated at 120

tonnes in 2003, showing little signs of an increase in 2004. Aquaculture and culture-based capture fisheries production is constrained by lack of good-quality feed and fingerlings.

In recent years the fishery products processing plants located in Tbilisi, Kutaisi, Batumi, Sukhumi and Gagra have not been operational. In 2004, only two fishmeal plants and a number of small-scale artisanal workshops for curing fish were operational in Tbilisi and other cities. The marketing of fish on the domestic market takes place mainly through some specialized fish markets in Batumi, Poti, Ureki and Mattakva and large food markets in the capital and other main cities. Supermarkets increase the diversity of fishery products for sale with a large variety of imported products, since there is consumer demand for value-added products that are not currently being produced in Georgia.

The volume of imports of fishery products in 1999 was 4 180 tonnes. This volume decreased considerably in 2000 and 2001 to just over 2 500 tonnes and increased again to almost 4 840 tonnes in 2003. Imports of fishery products in terms of value have increased steadily over the last few years, from US$1.1 million in 1999 to US$2 million in 2003. Over the last decade imports of fishery products by Georgia have always been higher than exports, but this has changed in recent years. In 2001 and 2003 exports in terms of volume were higher than imports. This is largely caused by the fact that Ukrainian and Turkish fleets catch anchovy in Georgian waters and land the fish in Turkey and in Ukraine. The catch of these fleets is thus registered as exports.

It is estimated that present consumption of fishery products is less than 2 kg (live weight equivalent) per capita per year. By comparison, during the 1980s the average per capita consumption of fishery products was stable at around 19 kg. Demand for fishery (including aquaculture) products is high, and is estimated to be even higher than the consumption levels of the 1980s; however, market supply of fish is limited and prices and quality do not correspond with demand.

Total employment in the fishery sector was estimated at 3 200 persons in 2004. The majority work in coastal small-scale fishing activities. Fishery sector research, education, training and extension are all currently being undertaken at very low levels. There is no education or specific training programme for capture fisheries and aquaculture. Fishery research is only kept going by funds from foreign donors.

Georgia has ratified a number of international agreements on fisheries in the last decade. However, the lack of a fisheries law, policy and planning has made it impossible to follow up on these agreements. In 2004 efforts were initiated to fill these gaps and the draft new fisheries law and the present Master Plan are two examples of the Government's willingness to comply with international laws and agreements.

Improvements in the collection and analysis of fishery statistics are currently being made by the Department of Fisheries and it is thus expected that the quality of fishery statistics will increase considerably over the next few years. Access to formal credit and investment sources for fishery and aquaculture entrepreneurs is lacking at present. No financial institution is willing or in a position to provide the credit services that are required for the sustainable development of the fishery sector.

International assistance to development in the Georgian fishery sector has been limited over the last decade since the Government did not prioritize the sector. It is hoped that this

situation will change with the approval of the legal and policy framework for fisheries, including the new fisheries law and the Master Plan. These will help bilateral and international donor agencies to identify the assistance needs of the sector.

The strengths of and opportunities for the fishery sector identified during the review study are the following:

- Georgian hydrobiological marine and inland water resources are generally underexploited or moderately exploited. For instance, a large part of the anchovy resources in Georgian waters has not been utilized or harvested in recent years.
- The marine fishing fleet is relatively small and overcapacity of the fleet, as is the case in many countries, does not exist.
- Georgia has environmental conditions suitable for the development of aquaculture, such as many rivers and reservoirs with good water quality.
- The current fishery administration, the Department of Fisheries of the Ministry of Agriculture, is small and as such does not require many financial resources from the Government of Georgia.
- The majority of Georgian marine fishers are organized in fisher's associations and cooperatives, which makes them relatively easy to reach for government services and incorporation in government decision-making processes.
- The fishery sector is now being prioritized by the Government of Georgia and, therefore, should be included in future phases of the Economic Development and Poverty Reduction Programme (EDPRP) of Georgia and obtain funding accordingly.
- With the participatory preparation of the Master Plan for Fishery Sector Development in Georgia, 2005–2020, the Government has initiated discussions with all relevant stakeholders. Increased stakeholder collaboration and involvement in decision-making processes seem possible with only limited efforts.
- The Master Plan and the new fisheries law will (once approved by the Government) provide a basis for sustainable development of the sector in the coming years and will allow international donors to support the Government in its efforts towards sustainable development.
- Georgia has ratified a number of international agreements that relate to fisheries and their resources and utilization. Under these agreements there are generally mechanisms and funds available that support countries in their implementation.
- Uniting international and regional fisheries bodies will increase Georgian access to information and collaboration on fisheries resources, research, management, education, techniques, marketing and trade.
- The hydrochemical and biological conditions of Lake Paliastomi provide possibilities for stocking the lake with common and Chinese carp, foreseeing an increase in annual production.
- Prices paid for fish and fishery products on the domestic market are relatively high compared with those in Europe and neighbouring central Asian countries.
- Demand for low-priced fishery products on the domestic market is high, which may be regarded as an incentive to develop the capture fisheries sector.
- As there is currently no fisheries management system in place, it is possible to adapt modern cost-effective management systems, taking advantage of the lessons learned by other countries and building on up-to-date information on comanagement schemes and programmes.
- Anchovy and other small pelagics that are abundant in Georgian marine waters can be used for human consumption and for the production of fishmeal.

- Feasibility studies on the fishing fleet (both large- and small-scale) could assist the sector in modernizing the fleet, including facilities on board such as navigation, gears, safety and product quality maintenance.

3. National development objectives

The Government of Georgia did not consider fisheries a priority sector for development until recently, when it decided that a fisheries law should be enacted and a Master Plan for fisheries developed.

In the current governmental Economic Development and Poverty Reduction Programme of Georgia, there is little reference to the fishery sector, and among the objectives, sphere, functions and tasks of the Ministry of Agriculture, it is not even mentioned. It may thus be concluded that national objectives or goals for the fishery sector have been non-existent; however, this situation will change with the present Master Plan.

As far as the 2004 EDPRP is concerned, the only references to fisheries and fish were those in relation to the consumption of meat, fish and dairy products and the investments to be made for the rehabilitation of the fishery sector and artificial restocking of sturgeon in the Black Sea. Thus, it should be recognized that the EDPRP is important for the fishery sector as it provides an established overall framework of national economic policy.

The EDPRP emphasizes that, while privatization of agricultural (including fisheries) enterprises is ongoing, it must be recognized that privatization so far has not led to significant growth in production. Privatization in the fishery sector had a negative effect on marine capture fisheries production since many of the privatized fishing vessels no longer fish in the Georgian maritime zone. The privatization process also affected inland aquaculture production in ponds, lakes and reservoirs, since private entrepreneurs were not able to obtain access to financial resources for restocking and fertilization of waterbodies and the purchase of fish feed, unlike the previously state-owned companies.

Many issues in the EDPRP that concern agriculture are valid for fisheries. For instance, it is stressed that most agricultural households have insufficient technical equipment, knowledge, credit and other resources, resulting in low labour productivity. The EDPRP also recognized that an increase in the adoption of modern technology will inevitably lead to a decline in employment opportunities and will cause significant social and demographic change; however, this is not likely to be the case in fisheries where employment levels are already at the lowest and any improvements in modern vessels, fish processing plants or modern aquaculture technology would lead to an increase in employment.

The goal of the EDPRP is to improve the welfare of the population of Georgia. Two strategic objectives were formulated to achieve this goal: i) fast and sustainable economic development; and ii) reduction of poverty. The priorities of the EDPRP are the following: i) improvement in governance; ii) macro-economic stability; iii) improvement in the structural and institutional environment; iv) development of human capital; v) social risk management and improvement in social security; vi) development of economic priority sectors; vii) improvement in natural environmental conditions; viii) socio-economic rehabilitation of post-conflict zones; and ix) development of science and information technologies. For the Georgian fishery sector all these nationally identified priorities are

equally valid; the development of infrastructural facilities in the sector, the development of fisheries institutions, the increase in human capacity, the environmentally sustainable use of aquatic living resources, an improvement in science and the development of new technologies to contribute to the advance of the sector, are particularly relevant. It should be noted that fisheries are implicitly included in the EDPRP as one of the priority economic sectors, as part of the agriculture and food sector. The latter is listed as one of the five priority sectors.

The macro-economic policy of Georgia aims to attain fast and sustainable economic growth; maintain price stability; promote a favourable business and investment climate; increase budgetary revenues; secure debt sustainability; promote exports; and reduce the current account deficit. Nevertheless, it is implicitly acknowledged that economic growth can only be achieved by attracting investments. Again, what is valid for the national economy is also valid for the fishery sector; it is important to reduce the barriers and corruption that constrain the development of a favourable business environment.

The governmental view with regard to employment stresses the need for enhanced labour discipline, an increased degree of organization among employed people, and qualified and competent workers, particularly managers. Education to meet the needs of the various sectors with respect to the required number of competent staff and with the appropriate qualifications is considered essential. This also holds true for the fishery sector.

The Millennium Development Goals (MDGs) set at the World Summit on Sustainable Development in Johannesburg, South Africa in 2002, are considered by the Government of Georgia to be extremely valid for the country's development. To show its commitment to sustainable development the Government prepared a report on MDGs for Georgia in 2004. The importance of the progress towards achieving the MDGs, as one of the main indicators for development used by the Government, should be recognized by the fishery sector and its stakeholders for two reasons: i) because the sector has to contribute to the achievement of the MDGs at national level; and ii) as linkages between the MDGs and fisheries could be a potential source of governmental and donor funding.

The new fisheries law, which is currently in the process of being approved by the Government, is an important tool in the sustainable development of the Georgian fishery sector. Although at national level there has been no real fisheries law for a considerable time, Georgia is signatory to various international agreements on the protection and sustainable use of fish resources. These are, among others, the Bucharest Convention on Protection of the Black Sea against Pollution (1994); Convention on Biodiversity (CBD, 1994); the United Nations Convention on the Law of the Sea (UNCLOS, 1996); the RAMSAR Convention (1996); the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES, 1996); the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention, 2000); the Convention on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS, 2001); and agreements with the World Trade Organization. Moreover, Georgia was one of the first countries to accept the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (Compliance Agreement, 1993), which is an integral part of the FAO Code of Conduct for Responsible Fisheries (1995). These international agreements form a framework that in principle should direct a large part of the development of Georgia's fishery sector towards sustainability.

The Ministry of Agriculture, which is responsible for administrative and institutional reform in agriculture as well as fisheries, focuses on three main thrusts.
1. Formulate and implement a sustainable policy for agriculture and various priority programmes.
2. Control food and product quality, utilization of agricultural resources, testing and protection of breeds and food security.
3. Provide services to the sector including consultation, information, scientific development and staff training.

A start was made in 2004 with regard to point 1 above, with the drafting of a "Strategy for the Sustainable Development of Agriculture and the Food Security of Georgia" in which priority areas for the development of the agrofood sector are listed. Many of the priority areas for this sector are similar to those for the fishery sector; and as such will be discussed in the next chapters of the present Master Plan.

As part of the efforts under point 2 above, and particularly to achieve food security and food safety in the country, the Government of Georgia decided that a Food Security Code should be prepared and a Food Safety and Quality System established. Unfortunately, however, there has been no progress on these issues since the governmental decision was taken. In view of future implementation of any system for food security and quality control by the Ministry of Agriculture, it is important that the fishery sector be proactive, ensuring that it is involved in the formation of such a system.

The extension system referred to under point 3 above is an issue that has not received much attention so far in the fishery sector; nevertheless it is as relevant for the sector as it is for agriculture. The need for extension services among starting aquaculturists and artisanal fish processors is particularly high.

In 2004 the National Working Group on Sustainable Development began elaborating the National Strategy for Sustainable Development (NSSD) of Georgia. As the NSSD will form the basis for governmental activities in the area of environmental planning it is essential for the fishery sector to ensure that its interests are properly covered.

4. Principles and vision for Georgia's fishery sector

The principles upon which this Master Plan is based are the following.

- Fishery sector management and development are based on the principles set out in the FAO Code of Conduct for Responsible Fisheries.
- The objectives of the Master Plan are based where possible on hydrobiological, economic and social information on resources, their status and the communities that depend on them. In the absence of information the precautionary principle will be applied to management of the resources.
- The Department of Fisheries of the Ministry of Agriculture is responsible for the overall fishery policy objectives as detailed in the present Master Plan and for monitoring the status of implementation of the Master Plan's objectives.
- Implementation of the work towards achieving the objectives as set out in the Master Plan will be carried out jointly by a number of national, local and international agencies as appropriate.

The long-term vision for Georgia's fishery sector is stated thus.

"The fishery sector plays an important role in economic growth and social development of current and future generations in Georgia and the aquatic living resources within its territory are exploited and cultured in an environmentally sustainable and efficient way."

5. Time horizon for the Master Plan

The present Master Plan for Fishery Sector Development in Georgia is designed to guide the management and development of marine and inland fisheries resources and aquaculture for the period 2005–2020.

6. Monitoring and review of the Master Plan

The Department of Fisheries of the Ministry of Agriculture will monitor the implementation of the Master Plan. For this purpose, every three years it will produce an Action Plan as a short-term strategy. This Action Plan will describe *how* Georgia will work towards achieving the objectives of the Master Plan. The Action Plan will include clear performance indicators against which progress made with implementation of earlier Action Plans and the Master Plan can be monitored. Every year the Department of Fisheries will report on the implementation of the Master Plan in a review meeting to which all main sectoral stakeholders will be invited. In the same annual meetings the Action Plan may be adjusted and suggestions made for future action plans.

7. Overall objectives for fishery sector development

The overall long-term objectives for fishery sector development in Georgia are the following.

- Use aquatic living resources in a responsible manner, ensuring that present and future generations may enjoy these resources as a source of food, employment, income and recreation.
- Enhance institutional capacity in the fishery sector so that fisheries institutions are able to guide the development of the sector in an effective and sustainable manner and work towards the achievement of specific objectives for the future, as outlined in the present Master Plan.
- Establish a marine fisheries fleet, which is able to exploit both offshore and coastal aquatic living resources in a responsible manner, and consists of industrial, medium- and small-scale vessels that can land their fish in fishing ports and landing places with adequate facilities.
- Develop an inland capture fishery and a culture-based inland fishery that use the inland aquatic living resource potential effectively in support of rural poverty alleviation, food security, economic growth and development.
- Develop an aquaculture sector that produces the variety and quantity of good-quality products demanded by the market in an environmentally sustainable and socially and economically viable manner.
- Develop a fishery sector, including its directly supporting industries, that is modern, competitive, dynamic, socio-economically viable, and in which companies are led by skilled and competent private entrepreneurs.

- Integrate the post-harvest fishery sector in Georgian modern society and provide both domestic and foreign consumers efficiently with the quality, healthy and safe products demanded at a price competitive with the world market.

8. Responsible use of aquatic living resources

8.1 OVERALL OBJECTIVE

This is to use aquatic living resources in a responsible manner, ensuring that present and future generations may enjoy these resources as a source of food, employment, income and recreation.

8.2 ISSUES

These are, among others, fleet capacity, destructive fishing methods, the precautionary approach, biodiversity, access to resources, pollution and current management measures.

At present, Georgia's aquatic living resources are exploited far below their sustainable limits. The capacity of the fishing fleet is minimal. This is largely a consequence of the current state of the economy, which makes fish a luxury product for many households, and of the bad state of the fishing fleet and the market chain. It is likely that demand for fishery products will increase with economic recovery and the level of exploitation of aquatic living resources will increase with this demand.

Although aquatic living resources are not fully exploited, some fishing practices that are currently used are unsustainable and damage the resources for the future. For instance, some coastal and lake fishers use dynamite to fish, while others use fishing gears with very small mesh sizes or catch fish species that are in state of reproduction. Some fishing vessels continue to be engaged in illegal, unregulated and unreported (IUU) fishing. Pollution by other sectors (such as the oil industry and the army) is also negatively affecting Georgian coastal fish resources.

Very few management measures to protect aquatic living resources and biodiversity are being taken at present. This situation will become critical when the level of exploitation of the resources increases and the system of free access is maintained. Scientific advice given to fisheries administrations is inadequate, because of the low support that fisheries research institutions currently receive. In these circumstances a precautionary approach to fisheries management should be widely adopted and the necessary funds assigned to support fishery research work.

The new fisheries law (once approved by the Government) and the subsequent complementary fishery regulations and decrees should, together with the FAO Code of Conduct for Responsible Fisheries and scientific advice from fisheries research institutions, form the basis for responsible management of the aquatic living resources of Georgia.

Centralized fisheries management is expensive, as the experiences in many European countries, the United States of America, New Zealand, the Republic of Korea and Japan have shown. Enforcement of management measures through state agencies without the consultation and participation of sectoral stakeholders is almost impossible. Therefore it is important for Georgia to establish a management regime that is economically feasible and fits in with current worldwide trends for more stakeholder involvement in decision-

making and enforcement processes in the fishery sector. Community-based fisheries management might be the best option for sustainable coastal fisheries management in Georgia since it makes use of the human capacity available at local level and has proved that it can achieve effective management at a low cost to the state budget.

8.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following:

1. Base fisheries management on scientific evidence and knowledge about aquatic living resources and their use.
2. Manage fishery resources through measures based on the Law of Georgia on Fisheries and Aquaculture, the FAO Code of Conduct for Responsible Fisheries and other relevant applicable international instruments and arrangements.
3. Promote community-based management of fisheries, particularly for inland waters and coastal fisheries, to enable local communities and fishers' associations to participate in collaboration with the Fisheries Management Body in the regulation of access to and user rights and obligations of the resources and to reap directly the benefits of these resources.
4. Formulate and implement at least three management plans for marine fisheries, inland fisheries and aquaculture; these will follow the precautionary approach to conservation, management and exploitation of living aquatic living resources.
5. Establish and implement coordinated systems of enforcement of regulations, and of monitoring, control and surveillance (MCS) of aquatic living resources and their utilization.
6. Integrate fisheries management in coastal areas in national- and regional-level coastal zone management efforts.
7. Combat and eliminate illegal, unregulated and unreported (IUU) fishing by fishing vessels under the Georgian flag.

9. Institutional strengthening and capacity building

9.1 OVERALL OBJECTIVE

This is to enhance institutional capacity in the fishery sector so that fisheries institutions are able to guide the development of the sector in an effective and sustainable manner and work towards the achievement of specific objectives for the future, as outlined in the present Master Plan.

9.2 ISSUES

These are, among others, capacity available, funding, linkages within the sector and with other sectors, conflicts, management and information.

Budgetary constraints have delayed and, in some cases, completely terminated activities in research, education and administrative institutions in the fishery sector.

The majority of the staff working in these institutions were trained before the 1990s in the former Soviet Union and have since had limited or no opportunities to keep their knowledge and skills up to date. This means that most new developments in the fishery sector have not reached Georgia in the last two decades. Many staff in the Department of Fisheries and fishers themselves still think in terms of centrally planned patterns of production. The inflow of young professionals to the sector has decreased not only as a

result of limited prospects for earning a reasonable income from fisheries, but also because of the non-existence of formal fisheries and aquaculture education in Georgia.

In recent years, fisheries research institutions have adhered to the limited funded research programme of the Government and some foreign donors (European Union, World Bank), while giving up some basic research (e.g. in stock assessment) which was carried out when Georgia was part of the Soviet Union.

The Department of Fisheries

The Department of Fisheries, as part of the Ministry of Agriculture, officially has the following duties and responsibilities (Order No. 2-53 of the former Ministry of Agriculture and Food of Georgia, dated 10 April 2001: On the Approval of the Charter of the Saktevzi Department of Fisheries):

- elaborate a comprehensive government development policy on fisheries in Georgia and set priorities for all types of fisheries;
- make optimal use of the export potential of fish and fishery products originating from all types of fishery resources (marine and inland waters plus aquaculture);
- elaborate draft normative acts within the competence of the Department and present them for approval in accordance with existing regulations;
- prepare a fishery investment programme and support its implementation;
- promote the employment of qualified fishery specialists in fishery enterprises;
- produce and deliver fish products to satisfy domestic needs.

It is clear that with its limited human and financial resources the Department cannot possibly realize all these duties and responsibilities satisfactorily. The lack of a comprehensive fishery policy in the government, and especially in the Ministry of Agriculture, exonerated the Department of Fisheries from being accountable for its activities over a long period.

The older staff members of the Department find it hard to move away from the former Soviet style of command and obey and the relative extremely restrictive control systems. Furthermore, it is very difficult to recruit young fishery specialists in Georgia because of the non-existence of formal fisheries and aquaculture education and training facilities. Even though it is clear that change requires considerable powers of adaptation as well as time, there is no reason why action should not start now.

Responsible fisheries management and development require the support of a fisheries management body, which should in principle have specific functions that encompass many of the actual functions assigned to the Department of Fisheries and those of other government agencies involved in fisheries management and development activities. These functions are to:

- formulate fisheries policies and management plans and support the implementation of fisheries development projects;
- coordinate, collect, analyse and disseminate data and information related to fishery activities;
- issue licences and permits for capture fisheries and aquaculture activities;
- ensure the implementation of fishery regulations through MCS;
- liaise, discuss and make joint decisions with all fishery stakeholders;

- liaise and negotiate with those involved in activities that have an impact on capture fisheries and aquaculture resources;
- promote fishery and aquaculture research;
- promote the development of small-scale fisheries and aquaculture farms.

The above functions, coming together in a single fisheries management body, will not prevent the involvement of other agencies with a legal mandate and interests in fishery activities but they should all interact through coordination and cooperation, with one of them acting as lead agency on behalf of the state. The FAO Code of Conduct for Responsible Fisheries, which was agreed upon by the Government of Georgia, stated that responsible fisheries management and development require the existence of a national fisheries authority (the Fisheries Management Body), which represents the interests of the government in the exploitation and utilization of fishery resources and the management and development of aquaculture.

The Fisheries Management Body usually also has other administrative functions, such as participation in international cooperation on fisheries management, cooperation in the protection of the environment relevant to fisheries, procurement of financial resources for fisheries and promotion of the development of small-scale fisheries.

In order to carry out all these functions, the Fisheries Management Body needs to be staffed with specialists in fisheries economics and planning, fisheries biology, aquaculture, fisheries legislation, fisheries inspection, fisheries statistics, fishing engineering, sociology and public relations. The staff of the Fisheries Management Body should also be assisted by appropriately equipped offices in terms of communication and data processing technologies. The specialists should have access to computerized techniques and be updated periodically on information technologies, foreign languages and technical issues concerning their specialities. Participation of staff in international forums is essential for keeping their knowledge up to date on international progress made in fisheries management and sustainable development of the sector.

Other institutions

Responsible fisheries management and development also require the participation of institutions representing the interests of stakeholders in the fishery sector. These institutions are of particular importance in the case of Georgia, where the fishery industry needs to be reconstructed from the very beginning and the task cannot be undertaken by the government alone. With regard to fisheries management and development, the institutions should cooperate with the Fisheries Management Body. For instance, it is necessary to establish and develop strong fishers' associations such as trade union organizations or fishing cooperatives. These organizations must deal with resources, social services, technical assistance and training for the development of fisheries, as well as for the improvement of social conditions in their communities. They should cooperate with the Fisheries Management Body in providing data and information, discussing fisheries management options, participating in development projects and cooperating in comanagement schemes and resource conservation efforts in inland and coastal fisheries.

Fishers' and aquaculturists' organizations, cooperatives and associations need to be strengthened since they are responsible for defending their members' interests, and for providing advocacy services to their members regarding governmental and other sectoral stakeholders.

Fisheries research institutions are essential for fisheries management and development. Only a well-organized, staffed and funded system of fishery (including aquaculture) research is able to provide the scientific information that the Fisheries Management Body needs in order to be able to take well-founded decisions on fisheries management and development. In Georgia, there are two main fisheries research institutions: the Marine Ecology and Fisheries Research Institute (MEFRI) of the Ministry of Environment Protection and Natural Resources, located in Batumi, and the Institute of Zoology of the Academy of Sciences of Georgia, located in Tbilisi. The former is specialized in marine research and the latter is able to carry out research on freshwater living resources. These prestigious academic institutions should be enabled to provide the scientific advice necessary for the Fisheries Management Body but at present they receive limited or no support from the government and their capacity to carry out research in support of fisheries management and development is extremely restricted.

The only way to maintain an influx of fishery scientific information to be used as a basis for fisheries management and development decisions is to find a permanent source of funding such as a special fund for fishery research. At present, no special fund created with government support operates in Georgia. The Fisheries Management Body needs to investigate ways to establish and maintain a permanent source of finance to ensure a continuing flow of necessary scientific advice.

An efficient fishery statistics system that is able to provide the data and information needed to take decisions on fisheries management and development aspects is important for a Fisheries Management Body. The organization responsible for the collection, processing and dissemination of statistical data and information in Georgia is the Department of Statistics of the Ministry of Economic Development. However, the information available at present on fisheries production, market, trade and fish consumption is incomplete and inadequate and does not reflect the real picture. The data and information do not satisfy needs in relation to fisheries and aquaculture management and development, and it is therefore essential that the Department of Statistics be assisted in fishery specific matters by a fisheries authority.

It is necessary to establish appropriate mechanisms to deal with the conflicting interests of different users such as commercial/recreational, conservation/exploitation, artisanal/industrial as well as governments (local/national) and areas impacting on fisheries. One approach to reaching close cooperation and mutual acceptance among different interest groups and the fisheries authority is the establishment of an advisory and consultative body, led by the fishery authority and integrated by representatives from the main stakeholders, representatives from governmental agencies with interests in the fishery sector, and representatives from areas not directly related to fishery activities but that impact on fisheries.

9.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following.

1. Establish a Fisheries Management Body that is capable of providing the services and support needed by the Georgian fishery sector and that functions effectively to meet the challenges of a twenty-first century economy.
2. Establish pertinent systems of fluent coordination and formal linkages with other sectors wherever relevant, which allow an adequately financed Fisheries Management

Body and other sectoral institutions to support the development of the fishery sector in a sustainable manner.

3. Establish a practical legal and regulatory framework for the fishery sector, properly linked with other sectors, which enables the sector to grow in a sustainable manner with minimum administrative and management costs attached.
4. Promote the organization of fishers in organizations, associations and fisheries cooperatives and enable them to act as counterparts of the Fisheries Management Body. These organizations (trade unions, cooperatives and other associations) should be developed and strengthened so that they are able to defend the interests of their members, attract resources for the social development of their communities and cooperate with the Fisheries Management Body and other institutions in the management and protection of coastal aquatic living resources.
5. Develop and implement a joint and coordinated research programme of fisheries science and research institutions at national level, to include all aspects of fisheries such as biology, ecology, technology, traditional knowledge, environmental science, economics and social and nutritional science, in order to use these results as a basis for setting management and development objectives, reference points and fisheries performance criteria.
6. Establish a formal fisheries educational programme that creates awareness among young people of opportunities in the fishery sector and provides an adequate, tailor-made and modern education for both young and old who are interested in working in the fishery sector or wish to increase their skills in certain aspects of fisheries.
7. Establish at least one commercial fisheries extension service with the financial and technical support of the Fisheries Management Body and fisheries research institutes, in order to address the specific extension services needed by poor fishers (on a cost-recovery basis) and by private entrepreneurs (based on commercial rates).
8. Put in place a fishery statistical system that compiles fisheries, aquaculture, employment, trade and other supporting scientific data in such a way that it forms an integral part of the national statistical system. This fishery statistical system should enable a comparison between the fishery sector and other sectors on essential indicators and will help to fulfil the international annual status reporting requirements (e.g. for FAO).
9. Increase regional and international cooperation on fisheries issues through membership of Georgia in the General Fisheries Commission for the Mediterranean (GFCM), the European Inland Fisheries Advisory Committee (EIFAC), EUROFISH in the field of marketing and trade of fishery products, and in the area of research through membership in the Network of Aquaculture Centres in Central and Eastern Europe (NACEE) and the Convention for Fisheries and Conservation of Living Resources of the Black Sea.
10. Simplify, streamline and shorten the administrative procedures for obtaining business licences and permits to be active in capture fisheries and aquaculture. A one-counter approach for obtaining permits for aquaculture will be adopted.

10. Responsible development of marine capture fisheries

10.1 OVERALL OBJECTIVE

This is to establish a marine fisheries fleet, which is able to exploit both offshore and coastal aquatic living resources in a responsible manner, and consists of industrial, medium- and small-scale vessels that can land their fish in fishing ports and landing places with adequate facilities.

10.2 ISSUES

These are, among others, fisheries techniques, gear selectivity, state and size of the fleet and landing facilities.

There is scientific evidence that the resources of small pelagics in the Black Sea area of Georgia are underexploited at present, which means that there are opportunities to increase the fisheries output of these species.

The most promising resources in the marine environment are the small pelagic species, such as anchovy, sprats, horse mackerel and European sardine. Some demersal species such as blue whiting, thornback ray, turbot and the mollusc rapana also appear to have potential for increasing fishery output from the coastal zone. Nevertheless, in order to exploit the potential of marine fishery resources in Georgia, the condition of fishing port facilities, the fishing fleet and the destroyed processing infrastructure needs to be reverted. It is probable that most of the pelagic fishery resources will be used as raw material for the production of fishmeal and fish oil at the start of the rehabilitation process. Gradually the fish processing industry will be built up and when the economy continues to flourish, the production of fishmeal and oil will diminish in favour of a larger utilization of fishery products for human consumption.

In order to keep the fleet operational, repairing facilities will have to be established and maintenance and repair schedules respected. The size of the future fishing fleet will become a relevant discussion issue in order to avoid an excessive growth in fishing capacity as has occurred in many other countries. The total allowable catch in the Black Sea, the destination of fishery products (fishmeal and products for direct human consumption), the number of foreign fishing vessels allowed to operate in Georgian waters and the economic feasibility of the various vessels and gear types are factors to bear in mind when determining the optimal capacity of the future fishing fleet. The construction of small vessels with low investment and operational costs should be encouraged, in view of long-term economic feasibility, rather than large industrial seiners.

Currently in 2005, foreign fleets can easily fish under the Georgian flag and can obtain fishing permits under the same conditions as the national fleet. For example, current tax levels for the catch by both fleets (national and foreign) are very low (7 Georgian lari per tonne) and do not distinguish between the two fleets. It is almost impossible for the authorities to monitor the catches of foreign vessels as transshipment of fish takes place at sea and part of the landings takes place in foreign ports. These practices make it likely that foreign fleets catch a substantial quantity of fish without paying taxes for it, thus placing a burden on the national fleet which cannot compete with them, since its catches are landed, recorded and taxed in Georgia.

The Georgian marine fishing fleet is at present too small to exploit the potential commercial living resources of the Georgian EEZ fully. In addition, the fleet consists of old and inappropriate vessels (seiners) that are generally only used for part of the year. A more diversified fleet would allow fishers to continue fishing in those seasons when anchovies and sardines are not available in Georgian waters.

Fishing ports should be repaired and new port facilities created. The construction of landing places for small- and medium-scale fishing vessels should be encouraged.

10.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following.

1. Develop a marine fisheries fleet, consisting of a good mix of industrial and medium- and small-scale vessels, using a variety of gears, methods and practices, and catching a minimum of 50 000 tonnes of fish in the Georgian EEZ so that no aquatic species are exploited beyond their sustainable limits.
2. Equip the marine fishery fleet with modern fishing gears and navigation equipment (compass and global positioning system [GPS]) enabling it to use selective methods and practices to minimize waste, discards and bycatch of non-target species, which are non-destructive and mean that operations are conducted in a safe manner for the fishing crew and others.
3. Modernize the fisheries fleet with facilities on board to handle and maintain the fish in good quality, with life vests to increase crew safety and with fish finders enabling the crew to locate the fish in a cost-effective manner.
4. Rehabilitate fishing ports and landing places so that they form a safe haven for vessels and their crews, and are equipped with fresh water and electricity supplies, sanitary services, waste disposal facilities, and a roofed area where fishers, wholesalers and retailers can do their business.

11. Responsible development of inland fisheries

11.1 OVERALL OBJECTIVE

This is to develop an inland capture fishery and a culture-based inland fishery that use the inland aquatic resource potential effectively in support of rural poverty alleviation, food security, economic growth and development.

11.2 ISSUES

These are, among others, culture methods, production, poverty in rural areas and technology.

Two kinds of inland fisheries can be differentiated in Georgia: the harvest of wild fish from inland fisheries, mostly in rivers and lakes, and the harvest of fish in waterbodies (ponds, lakes and reservoirs) that have been stocked with fry or fingerlings reared in aquaculture hatcheries and intentionally released with the purpose of establishing and/or augmenting the biomass of fish in the water body. The first kind of fishery is the capture fishery and the second is a culture-based fishery.

Wild inland fishery resources are not very abundant in Georgia and their potential cannot be compared with that of marine capture fisheries. Through restocking of inland fishery bodies with fingerlings reared in hatcheries, the productivity of these waterbodies can be increased. In the past, culture-based fisheries in inland waters benefited from the Soviet programme of restocking inland waterbodies and also from the control over the resources provided by the large Soviet system of fishery MCS. The state fishery restocking programme was abolished after independence and state control over inland fisheries has almost disappeared. It is not realistic to re-establish a governmental restocking programme and a system of fishery MCS for inland fishery resources at government expense, because of the high costs involved.

In order to take full advantage of inland fishery resources and establish a cost-effective management of these resources, local-level government and fishers' organizations should be involved in the management of inland fisheries.

No institution can, at present, issue licences/permits, carry out MCS, or enforce fisheries law and regulations in the hundreds of inland waterbodies of Georgia. Only with the cooperation of local governments and fishers would the (future) Fisheries Management Body be able to implement management measures and have some control over inland fishery activities.

The above-mentioned cooperation should start during the process of preparing fisheries management plans. The Fisheries Management Body can delegate, through specific operative agreements, some of its responsibilities to local governments in the context of a fisheries management plan. This approach fits in very well with the Government of Georgia's aim to decentralize part of its governance structure and give local-level authorities more freedom to develop the area under their jurisdiction. Issuance of permits for inland capture fisheries and for restocking of fish should be delegated to local governments. The Fisheries Management Body would set detailed conditions for obtaining and renewing permits in close collaboration with local government and fishers' representatives. The revenues obtained from the permits would be shared as appropriate, and used for monitoring and protection of fishery resources. In any case, the Fisheries Management Body and its partners need to establish clear channels of communication, and undertakings and responsibilities should be strictly fulfilled by each party.

The issue can be complicated in certain cases by the fact that access to inland water resources for subsistence fisheries should still be given to the poor, according to mutually agreed rules. Therefore the leasing of exclusive rights to use inland fishery resources should be accurately studied and decisions taken on a case by case basis at local level.

The inland (and marine) fishery resources of Georgia also have good potential for the development of recreational fisheries (i.e. angling/sport fishing) as some rivers are located in beautiful natural areas. Recreational fishery activities can be linked to tourism under coordinated programmes; tourism itself will contribute to the better use and protection of hydrobiological resources, generation of rural employment, rural economic development and alleviation of poverty.

11.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following:

1. Reach a production of at least 5 000 tonnes of fish annually in inland capture fisheries, including culture-based fisheries, through harvesting wild fishery resources and stocking lakes and reservoirs with high-quality fingerlings by private fisheries associations and entrepreneurs enabled to lease and participate in the management of the waterbodies in a sustainable and cost-effective manner.
2. Establish a framework for recreational inland fisheries that enables the Fisheries Management Body, jointly with local governments, to issue fishing permits for inland waterbodies to recreational fishers and tourists.
3. Promote the formation of inland capture fisheries associations of private entrepreneurs with a clear commercial focus that can play an active role as sectoral representative bodies in discussions and negotiations with the Government of Georgia.

4. Establish associations of recreational fishers who use inland water resources as a means of recreation and cooperate with the Fisheries Management Body in the protection of inland fishery resources in all main inland waterbodies of Georgia.
5. Develop and implement a national-level framework for subsistence inland fisheries that respects the fishing rights of commercial inland fishers and allows the poorest to access certain fishing areas to catch the fish required to fulfil their daily food security needs.
6. Restock at least six reservoirs and rivers with support from the Government of Georgia in which poor people can fish to fulfil their daily food security needs.
7. Construct or repair at least ten fish landing places to address the needs of commercial inland capture fisheries and that are equipped with clean fresh water, electricity, sanitary services, waste disposal facilities and a roofed area for shelter and where fishers, wholesalers and retailers can do their business.

12. Responsible development of aquaculture

12.1 OVERALL OBJECTIVE

This is to develop an aquaculture sector that produces the variety and quantity of good-quality products demanded by the market in an environmentally sustainable and socially and economically viable manner.

12.2 ISSUES

These are, among others, culture methods, production, poverty in rural areas, technology and environmental impact.

Demand for aquaculture products on the domestic market is high. Georgia imports relatively large volumes of fishery (including aquaculture) products to satisfy this demand since the marine and inland capture fisheries sectors do not seem to be able to do so in the short term. Georgians traditionally have a preference for salmon, sturgeon, freshwater shrimp and other fish and shellfish that could be produced in the country on aquaculture farms. In addition, opportunities exist for exporting aquaculture products to Russia and other former Soviet countries.

Aquaculture is still in the initial stages; the subsector has possibilities for increasing production of a diverse range of species in both inland waters and the marine environment. Current aquaculture production for the market is limited to trout culture from flow-through systems at small-scale farms and culture-based inland fisheries in ponds, lakes and reservoirs. These inland waterbodies are restocked with fingerlings produced by aquaculture hatcheries. The main species are common and grass carp. Research on hatchery techniques, fish health management, fish feeding and feed production is required to bring down further the costs of fingerlings and feed and improve quality.

Feed for trout culture is currently imported at a high price, while the fishmeal produced from the national marine capture fisheries could also be used to prepare aquaculture feeds.

The development of aquaculture is currently constrained by the lack of fish feed on the domestic market, the low level of production of eggs and fingerlings and their poor quality, and the lack of credit, microfinance and insurance suitable for aquaculture operations.

There is some potential for the development of marine aquaculture in the Black Sea coastal area. Oysters, mussels, mullet, flatfish, sturgeon and the mollusc rapana, *inter alia*, seem to have prospects, although further research should be conducted in order to design appropriate technologies and suitable methods for the culture of these marine organisms. Pollution of coastal areas is a real danger for any aquaculture development intended in the coastal zone of Georgia, as oil spills and other coastal activities that negatively affect water quality are widespread.

Aquaculture could offer opportunities for rural poverty alleviation in Georgia. In many parts of Asia and Europe rural aquaculture development is already considered one of the more successful approaches to poverty alleviation. In order to take advantage of aquaculture as a poverty alleviating tool it should be recognized as such by the Government of Georgia and promotion of the activity is required. Technological developments in aquaculture in Georgia were very limited over the last decade and therefore significant impetus is needed to bring Georgian aquaculture up to international levels.

12.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following:

1. Develop an aquaculture sector that produces fish that domestic consumers and the export market demand.
2. Produce at least 2 000 tonnes annually in the aquaculture sector by technology enhancement, increased access to good-quality and reasonably priced feed and fingerlings, and to credit, microfinance and insurance.
3. Increase diversity in the aquaculture sector, using a variety of species (trout, carp, oysters, mussels, mullet, flatfish, sturgeon and the mollusc rapana), culture areas (such as ponds, cages and tanks) and systems (extensive and intensive and integrated aquaculture with agriculture and livestock raising).
4. Support the establishment of aquaculture associations that work on the development of codes of good practice and play an active role as sectoral representative bodies in discussions and negotiations with the Government of Georgia.
5. Obtain national-level self-sufficiency in fry, fingerling and fish feed production through private hatcheries and feed factories that have access to cheap credit and quality advice and support from national fisheries and agriculture research institutes.
6. Promote the role of aquaculture in rural poverty alleviation, community development and the achievement of food security in Georgia.
7. Develop and use technology that encourages economically viable culture systems of oysters, mussels and other marine organisms in the Black Sea coastal region.
8. Practise aquaculture in an ecologically sustainable manner and monitor its effects on genetic diversity and ecosystem integrity in order to minimize adverse consequences on the ecosystem and social and economic conditions.
9. Develop aquaculture based on native species; the introduction of non-native species or genetically altered stocks may be possible only after potential associated risks have been scientifically assessed and government approval has been obtained.
10. Develop and implement a code of good farm and fish health management practices in aquaculture.
11. Establish and implement a cost-effective fish health monitoring system with government support.

13. Privatization, investment and enterprise development

13.1 OVERALL OBJECTIVE

This is to develop a fishery sector, including its directly supporting industries, that is modern, competitive, dynamic, socio-economically viable, and in which companies are led by skilled and competent private entrepreneurs.

13.2 ISSUES

These are, among others, the state of the privatization process, access to credit and investment sources, management strengthening, the infrastructure situation and current support.

As far as the ownership of fishing vessels is concerned, the state has gradually decreased its share in ownership to a large extent; in 2005 only a few of the operational fishing vessels can still be considered as state owned.

Since only obsolete, outdated and completely destroyed fish processing facilities can be found in the country, privatization is not an issue for the processing or the aquaculture subsectors. However, it is a continuing source of debate for fish marketing and trade, and also for culture-based inland fisheries. A number of state-owned fish hatcheries and fish landing places are still under government control. Disorder in the fisheries administration and the weakness of fisheries institutions prevent the Government from having an accurate inventory of what has been privatized and what is still state owned. It is widely considered appropriate that state-owned hatcheries and cool storage warehouse facilities be privatized in the short term; fish landing sites and fishing harbours still need to remain (local) state property for the time being, in view of their additional functions in the field of customs, national security and migration and the current lack of investor interest. Nevertheless, management of these facilities could already be transferred to interested private sector entrepreneurs.

Corruption is a problem in Georgia. Together with an unstable political environment and internal problems in South Ossetia and Abkhazia, corruption is hampering foreign direct investment in the country, including investment in the fishery sector. What is true for foreign investors is the same for national investors.

Until the early 1990s the fisheries fleet was centrally managed, with set production targets and related investments. Fishing company management was largely limited to following up orders from the central authorities, which meant that innovative and strategic thinking, bookkeeping, marketing and modern management were not promoted for a long time. As a result the necessary skills for these activities are largely lacking in the current Georgian fishery sector.

Fishery sector development requires large investments, for example in fishing port facilities, the fishing fleet, fish processing, transportation and storage of fishery products and export and import of products. It also needs microcredit or microfinance for small-scale operations in the harvesting, processing and marketing areas. At present, the fishery sector is not subject to any special line of credit in the country, which is perturbing.

Aquaculture development is also hampered by a shortfall in financial resources available to aquaculturists. Their financial capacity is often not enough to produce or purchase

fingerlings and fertilizers for pond culture of common and grass carp in a more intensive way. Therefore most carp culture practices can be considered extensive.

To establish a healthy fishery and aquaculture sector it is important that existing and new entrepreneurs obtain the essential knowledge required to become successful in the current business environment. The business and management skills of people entering the sector are not always sufficient. In order to avoid "new and innovative" businesses in the sector failing within a short period, with all the negative economic and employment consequences attached to such failure, small- and medium-scale enterprises in the sector need to be supported in obtaining the required skills and permits.

Fishery sector development is also constrained by the current state of the road and communication network in Georgia. Many rural areas with good hydrobiological opportunities for inland fisheries and aquaculture are badly connected to urban areas where fishery products are most in demand. Especially for fresh fishery products, which are highly perishable, the time between harvest and sale to consumers is crucial for quality and food safety reasons, so that major improvements to the road and communication infrastructure network in rural areas are needed.

13.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following:

1. Complete the privatization process of the fishery sector, including capture fisheries, aquaculture and fish marketing and trade.
2. Create access for small- and medium-sized enterprises (SMEs) in the fishery sector to capacity building, training and advice on business and investment planning and management issues on a cost-recovery basis.
3. Establish at least five formal public-private partnerships (PPPs) between the Fisheries Management Body, the fisheries science and research institutions and SMEs to carry out jointly part of the national fishery research programme and work together towards removing the constraints that hamper the growth and development of the sector.
4. Decrease and eventually remove import duties for essential equipment, fish feed, drugs and fingerlings that SMEs in the fishery sector need to develop their businesses.
5. Encourage financial institutions to provide fishers, aquaculturists and fish processors with access to microfinance, credit and insurance, based on adequate business and investment plans and feasibility studies, and tailored to meet the special needs of private entrepreneurs.
6. Improve the road and communication network that links urban areas with rural inland capture fisheries and culture-based fisheries in order to facilitate post-harvest activities and the access of tourists to these areas.

14. Post-harvest activities and trade

14.1 OVERALL OBJECTIVE

This is to integrate the post-harvest fishery sector in Georgian modern society and provide both domestic and foreign consumers efficiently with the quality, healthy and safe products demanded at a price competitive with the world market.

14.2 ISSUES

These are, among others, hygiene, product handling, product promotion, food safety, prices, exports, retail, hazard analysis and critical control point (HACCP) and international standards.

The development of the fishery sector in Georgia will depend to a large extent on the success of the rehabilitation of the fish processing sector. A significant proportion of the fishery output should be processed for the domestic market, since domestic demand outstrips supply by thousands of tonnes. Export markets should be redeveloped because the former Soviet fish processing industry has been abandoned for many years and its equipment and facilities have been spoiled. Two new plants for the production of fishmeal have been constructed recently in the Black Sea coastal region and some small-scale plants and workshops for fish curing and preserving have appeared in Tbilisi and other Georgian cities. No new plants for canning, curing or freezing and packing of fishery products have been built in recent years.

As this industry has to be reconstructed from the very beginning, it has to take advantage of the opportunities that newly developed technologies and modern insights provide with regards to the processing of fish into products demanded by consumers. Restoring and recovering old fishery processing plants are not feasible. The only way to establish a fishery products processing industry in Georgia is to build new plants. Overcapacity in the fish processing industry as in many other countries should not be allowed to happen in Georgia.

Investment in the processing sector should be carried out so that the facilities established comply with international regulations, monitoring and control mechanisms and safety and hygienic standards. For export to the European Union and other countries it is important for the new processing facilities to follow HACCP, international standards and quality demands from those countries.

The development of small artisanal labour-intensive plants and workshops for curing fish should be encouraged through training and extension work promoted by the fisheries administration. Financing resources for the construction of fisheries processing plants should be procured. Loans for small plants and workshops should be made available to SMEs.

Fish consumption per capita was much higher in the Soviet era than it is at the beginning of the twenty-first century. The limited availability of good-quality fresh fish at a reasonable price seems to be one of the main factors constraining consumption at present. Domestic demand appears to be high, creating retail prices that are not inferior to those in many Western European countries. These high retail prices do not allow the poorer part of the population to consume as much fish as they would like.

The current post-harvest losses of fish are relatively high as the maintenance of product quality can often not be guaranteed because of lack of cool storage, freezer and icing facilities.

14.3 SPECIFIC OBJECTIVES

Specific objectives for development in the Georgian fishery sector are the following:

1. Rehabilitate the fishery products processing sector so that it has modern facilities (such as freezers, fillet producers, smokers and canneries) that can add substantial value to the primary products.
2. Establish a fishery products processing sector with products that are demanded by domestic and export markets, and that are of good quality, healthy, safe for consumption and traceable to the extent demanded by the market.
3. Develop continuously new products and technologies in the fishery processing sector in close collaboration with the fisheries management body and research institutes, in order to play a foremost role in the Caucasus region.
4. Establish effective cooperation mechanisms in the fishery products marketing chain (vertical as well as horizontal) in order to increase sectoral profitability while producing fishery products demanded by the market.
5. Establish a semi-independent institute that carries out quality and food safety control of aquatic products (for export, import and the domestic market) in an efficient, cost-effective and sustainable manner, using internationally recognized standards and procedures.
6. Abolish completely direct government subsidies to the fishery sector.
7. Improve marketing infrastructure, including the establishment of a small but efficient wholesale market in Tbilisi and fish wholesale facilities at the main fishing port (Poti).
8. Establish a market and business intelligence system for the fishery sector as a tool in private sector and government decision-making processes.
9. Increase the fish trade with Russia, Turkey, Ukraine, the Caucasus and Europe through bilateral and free trade agreements.
10. Increase fishery (including aquaculture) products consumption in Georgia to a level of 15 kg per capita per year, through product promotion in partnership with the Ministry of Health, the Food Security Observatory and the fishery sector associations.

ACTION PLAN FOR FISHERY SECTOR MANAGEMENT AND DEVELOPMENT IN GEORGIA

2005–2008

Preparation of this document

The Action Plan for Fishery Sector Management and Development in Georgia, 2005–2008, has been developed following the Master Plan for Fishery Sector Development in Georgia 2005–2020. The drafting of this Action Plan to guide the responsible management and development of the fishery sector in Georgia has been recognized as an essential element in achieving long-term sustainability of fisheries in the country. Following various national workshops within the Master Planning process, the Department of Fisheries (DoF) of the Ministry of Agriculture of Georgia took the lead in the formulation of the Action Plan in early 2005 with assistance from FAO. The draft Action Plan was presented at the Workshop on Fisheries Legislation and Management held in Tbilisi in February 2005, and then circulated and discussed at a further National Conference on Fisheries Management and Development in Georgia, held in Tbilisi from 15 to 16 June 2005. The Action Plan will be finalized, to include the comments and observations obtained at the Conference by the DoF, before August 2005. After that it will be presented to the Minister of Agriculture for approval.

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1. Background and purpose

This Action Plan aims to start a process of active participation by the Government in the development and management of the fishery sector in Georgia. It contains the priority activities to be undertaken by the Government, the DoF of the Ministry of Agriculture, the fisheries research institutions and the donor agencies active in Georgia for the sustainable development of the fishery sector. It provides for short-term studies, project formulation and execution, and other activities for sectoral development, including capacity building; institutional strengthening, training and education; and priority development activities in the marine and inland capture fisheries, aquaculture and post-harvest sectors.

The Master Plan for Fishery Sector Development in Georgia details the general and long-term objectives for the sector – *what* should be achieved between 2005 and 2020. The Action Plan is largely based on the Master Plan and details *which* specific objectives as set out in the Master Plan are prioritized for the short term and *how* these objectives are to be achieved. The Action Plan also takes into consideration the findings of the Review of the Current Status of Fisheries Resources and Utilization in Georgia (a joint activity of the DoF, the Marine Ecology and Fisheries Research Institute [MEFRI] and the Food and Agriculture Organization of the United Nations), and the draft Law of Georgia on Fisheries and Aquaculture.

The purpose of the Action Plan is to assess and implement concrete actions to rehabilitate the fishery sector and start a process of sustainable development and responsible management of fishery resources. It is foreseen that the Plan will assist the fishery sector in contributing to national economic growth and poverty reduction in the short term. The focused interventions as proposed in the Plan are activities led by the DoF of the Ministry of Agriculture, in which the DoF will work in a participatory manner together with all relevant stakeholders. The Plan should increase the DoF's effectiveness and its focus on government priorities with the potential to produce swift, tangible and measurable outputs in the stagnant fishery sector in Georgia.

2. Time horizon

The Action Plan for Fishery Sector Management and Development in Georgia will guide the activities of the DoF and other stakeholders towards the management and development of marine and inland fisheries resources and aquaculture for the period 2005–2008.

3. Monitoring and review

The DoF of the Ministry of Agriculture will monitor the implementation of the Master Plan (2005–2020) and the Action Plan (2005–2008). For this purpose the DoF will establish an Advisory Board with clear terms of reference for monitoring, reviewing and advising on the implementation of the two plans. This Advisory Board will consist of representatives of fishers' associations, aquaculturists, research institutes, fish wholesalers and retailers, universities, ministries and other relevant authorities, invited by the DoF.

Progress made towards achieving the objectives of the Master Plan and Action Plan will be measured using comprehensive performance indicators (see Annex). Data collection and reporting on the performance indicators of the objectives for fisheries management and development in Georgia will be led by the DoF. The performance indicators will be reported on and reviewed at annual meetings of the Advisory Board to monitor progress in implementing the Action Plan and, in more general terms, the Master Plan. These annual meetings may also adjust specific objectives for achieving the overall objectives in the light of new, revised or additional information that may be collected.

4. Priority objectives for the Government

There are four priorities for the Government of Georgia with regards to the fishery sector that outstrip all others. Unless the Government takes urgent decisions on these four priority issues it will be impossible to manage and develop the fishery sector in Georgia in a sustainable manner. The priority issues are stated below.

- Agreement on and approval of the draft Law of Georgia on Fisheries and Aquaculture.
- Agreement on and approval of the Master Plan for Fishery Sector Development in Georgia (2005–2020).
- Decisions regarding the Fisheries Management Body; under which ministry it will be placed and how its functions and responsibilities relate to those of the DoF.
- Public recognition of the fishery sector as a priority sector for national economic growth, achievement of food security and alleviation of poverty.

5. Institutional support for the fishery sector

As discussed above, the DoF has a key role to play in the management and development of the fishery sector. Since the Government has decided to strengthen the DoF by substantially augmenting its staff and the allocation of funds for salaries and operations, the DoF should be expected to make a sound contribution to the management and development of the fishery sector in Georgia. Therefore, it should concentrate its efforts on the recruitment of new highly qualified and motivated staff. In this regard, a reorganization of the present staff structure should be undertaken and new posts filled as

soon as possible. All activities relevant to the fisheries tasks to be accomplished by the DoF, such as fisheries economics and planning, engineering, statistics, legislation, inspection, management, resources and aquaculture should be covered. Clear terms of reference for all staff should be developed before recruitment starts.

The new staff should be aided by offices equipped with communication and data processing technologies. They should be trained in the use of computers and in foreign languages and receive frequent technical and functional capacity building. Once the DoF is properly staffed, its first priority should be to provide support for the implementation, monitoring and review of the Action Plan. Means of transport should be made available by the Ministry of Agriculture and travel costs of DoF staff should be covered.

In view of the ongoing decentralization process in the Government it is important that the DoF is visible and accessible at the local level; it should therefore have staff outposted in important fisheries areas.

6. Methodology

In the drafting process of the Action Plan, use was made of the logical framework approach, which proved to be very useful in earlier planning exercises. While the Master Plan detailed the long-term vision, the principles, and the overall and specific objectives for fishery sector development, the Action Plan focuses on concrete and pertinent outputs that contribute directly to the achievement of specific objectives. In order to enable the DoF and other sectoral stakeholders to work directly towards achieving those specific objectives that have the highest priority in the short term (until the end of 2008), most of the intended outputs are formulated as projects.

For each of the projects considered to be of high priority the following information is listed.

- Title of project
- Project aim
- Reference to overall objective or specific objective of the Master Plan
- Main activities to be undertaken
- Ongoing activities in this field
- Prior activities required
- Responsible agency
- Supporting agencies
- Timetable for project
- Indicators of achievement
- Means of verification of project achievement
- Assumptions (and/or risks)
- Priority ranking
- Estimated budget
- Source of budget

The last two items above were included in order to ascertain the budget required and its provenance. They will allow the DoF to make more comprehensive requests to the Government for funding the priority activities. In addition, they will enable the DoF to search actively for funds from international donors that have an interest in assisting the Government of Georgia to develop its fishery sector. The total budget required for the implementation of this first Action Plan is estimated at approximately 8.2 million Georgian lari. Once the Master Plan is approved by the Ministry of Agriculture, clear and comprehensive proposals will be drafted for the priority projects and the required budget will be calculated in more detail.

7. Projects and activities

The projects in this section are considered to be the main priorities for the DoF in the period up to and including 2008. They are not presented in order of priority. Their order refers to the appearance of the specific objectives in the Master Plan to which they are related.

RESPONSIBLE USE OF AQUATIC RESOURCES (Chapter 8 of the Master Plan) Project 1

<table>
<tr><td colspan="3">Title of project. Establishment of the Fisheries Management Body (FMB)</td><td>Ref. in Master Plan – 8.3(3) and 9.3(1)</td></tr>
<tr><td colspan="4">Project aim. Establish an FMB that is capable of coordinating and leading activities in the field of fisheries management in both marine and inland waters</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Assign responsibilities to the FMB
• Recruit staff and equip offices
• Establish linkages with all stakeholders in the sector
• Establish an advisory council where stakeholders discuss policy issues on fisheries management</td><td>Ongoing activities
DoF is being strengthened with more staff</td><td>Responsible agency
To be determined by the Government</td></tr>
<tr><td>Prior activities required
Approval of Fisheries Law and Master Plan</td><td>Supporting agencies
Ministries</td></tr>
<tr><td>Timetable
2005–2006</td><td>Indicators
FMB functioning
Advisory Board established</td><td>Means of verification
Government decree on establishment</td><td>Assumptions
Government will prioritize the sector</td></tr>
<tr><td>Priority ranking
Highest</td><td>Estimated budget
100 000 lari</td><td colspan="2">Source of budget
Government</td></tr>
</table>

Project 2

<table>
<tr><td colspan="2">Title of project. Assessment of fishery resources</td><td colspan="2">Ref. in Master Plan – 8.3(1)</td></tr>
<tr><td colspan="4">Project aim. Assess fishery resources in marine and inland waters for the sustainable exploitation of such resources</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Determination of total allowable catch (TAC) of three main fish species in the Georgian EEZ of the Black Sea
• Classification of suitability of inland waterbodies for fisheries and aquaculture</td><td>Ongoing activities
MEFRI–DoF work in marine and inland waters</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
MEFRI</td></tr>
<tr><td>Timetable
Ongoing</td><td>Indicators
TAC
Number of waterbodies suitable for fisheries</td><td>Means of verification
Research reports</td><td>Assumptions
Continuing cooperation with neighbouring countries</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
200 000 lari
(for two years)</td><td colspan="2">Source of budget
DoF (possibly international donors) and neighbouring Black Sea countries</td></tr>
</table>

Project 3

<table>
<tr><td colspan="2">Title of project. Monitoring, control and surveillance (MCS) in fisheries</td><td colspan="2">Ref. in Master Plan – Chapter 8</td></tr>
<tr><td colspan="4">Project aim. Establish a monitoring, control and surveillance (MCS) system in fisheries, jointly with the Coastguard and other relevant authorities</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Design of MCS system
• Installation of equipment (including on vessels)
• Testing of MCS system in one region
• Nationwide implementation of MCS system</td><td>Ongoing activities
Few</td><td>Responsible agency
Fisheries Management Body (FMB)</td></tr>
<tr><td>Prior activities required
Approval of Fisheries Law</td><td>Supporting agencies
Coastguard, Ministry of Environment Protection and Natural Resources</td></tr>
<tr><td>Timetable
2007–continued</td><td>Indicators
Number of vessels that can be followed using MCS equipment</td><td>Means of verification
Logbooks
Reports of the FMB</td><td>Assumptions
Establishment of the FMB</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
1 000 000 lari
(for first year)</td><td colspan="2">Source of budget
Government (and also other Black Sea countries)</td></tr>
</table>

INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING (Chapter 9 of the Master Plan)

Project 4

<table>
<tr><td colspan="3">Title of project. Improvement of the fishery statistical system</td><td>Ref. in Master Plan – 9.3(8)</td></tr>
<tr><td colspan="4">Project aim. Improve fisheries data collection, analysis and dissemination in support of better decision-making in the sector</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Recruitment of statistics experts and enumerators
• Establishment of an adequately equipped national database on fishery statistics
• Nationwide extension of the pilot projects implemented in 2004–2005
• Dissemination of collected and analysed information</td><td>Ongoing activities
Pilot system for the Achara region</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
Inventory (also for inland fisheries and aquaculture)</td><td>Supporting agencies
Department of Statistics, fishers' associations, Ministry of Environment Protection and Natural Resources, Customs</td></tr>
<tr><td>Timetable
Ongoing</td><td>Indicators
Data availability
Number of enumerators</td><td>Means of verification
Data in database
Statistical reports</td><td>Assumptions
None</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
200 000 lari (for two years)</td><td colspan="2">Source of budget
DoF and possibly the FAO/EC project</td></tr>
</table>

Project 5

<table>
<tr><td colspan="3">Title of project. Geographic information system (GIS) mapping of agriculture, forestry and fisheries</td><td>Ref. in Master Plan – Chapter 9</td></tr>
<tr><td colspan="4">Project aim. Plan for sustainable development of agriculture, forestry and fisheries using GIS methodologies</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Inventory of resources
• Gathering, sorting and analysis of information
• Processing and mapping
• Training of staff in GIS mapping
• Production of periodical reviews for management decision-making and planning purposes</td><td>Ongoing activities
Land-use project by Ministry of Economic Development</td><td>Responsible agency
Ministry of Agriculture</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
DoF</td></tr>
<tr><td>Timetable
2007–2008</td><td>Indicators
Information in maps</td><td>Means of verification
Map
Periodic reviews</td><td>Assumptions
None</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
200 000 lari</td><td colspan="2">Source of budget
Government and donors</td></tr>
</table>

Project 6

<table>
<tr><td colspan="3">Title of project. Capacity building in fisheries and aquaculture</td><td>Ref. in Master Plan – 9.3(6)</td></tr>
<tr><td colspan="4">Project aim. Increase the professional capacity in fisheries management and development</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Carry out a sector-wide training and capacity building needs assessment
• Establish and execute a training programme for the DoF and education and research institutes
• Establish and execute a training programme for professionals in the fishery industry and aquaculture
• Evaluate and adjust training programmes</td><td>Ongoing activities
Limited (MEFRI and DoF)</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
Ministry of Education, Tbilisi State University, fishers' associations</td></tr>
<tr><td>Timetable
2006–continued</td><td>Indicators
Number of persons trained</td><td>Means of verification
Training manuals
Research papers
Training evaluation reports</td><td>Assumptions
None</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
300 000 lari (per year)</td><td colspan="2">Source of budget
DoF and international donors (including student exchange programmes), Turkey (potential donor)</td></tr>
</table>

Project 7

<table>
<tr><td colspan="3">Title of project. Organizational strengthening of associations in the fishery sector</td><td>Ref. in Master Plan – 9.3(4)</td></tr>
<tr><td colspan="4">Project aim. Facilitate the establishment and functioning of existing associations in the fishery sector to enable them to become qualified discussion partners of the Government and protect the interests of those working in the sector</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Awareness raising about the need for organization in the fishery sector
• Training in organizational establishment and management
• Provision of legal advice on status, advantages and disadvantages of various types of organizations
• Official recognition by the Government of associations as discussion partners</td><td>Ongoing activities
Fishers' cooperatives (e.g. Achara)</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
Fishers' cooperatives and associations</td></tr>
<tr><td>Timetable
Ongoing</td><td>Indicators
Number of fishers' and aquaculturists' associations
Membership of associations</td><td>Means of verification
Legal documents</td><td>Assumptions
Producers are willing to associate</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
50 000 lari</td><td colspan="2">Source of budget
DoF, fishers' cooperatives (and possibly international donors and NGOs)</td></tr>
</table>

Project 8

<table>
<tr><td colspan="2">Title of project. Increased regional and international cooperation in fisheries</td><td colspan="2">Ref. in Master Plan – 9.3(9)</td></tr>
<tr><td colspan="4">Project aim. Increase Georgia's participation in regional and international fishery activities (including fishery bodies, agreements and conferences)</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Assess the benefits and implications of membership of regional and international fishery bodies
• Evaluate the fishery agreements ratified by Georgia
• Enter into fishery bodies and agreements that respond to the interests of Georgian fisheries</td><td>Ongoing activities
Limited</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
Appointment of international liaison person by the DoF</td><td>Supporting agencies
International Cooperation Department of the Ministry of Agriculture</td></tr>
<tr><td>Timetable
2005–continued</td><td>Indicators
Assessment methodology
Participation of Georgia in regional/international bodies</td><td>Means of verification
Assessment reports
Membership agreements</td><td>Assumptions
DoF staff capable of speaking foreign languages</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
50 000 lari</td><td colspan="2">Source of budget
DoF (and possibly international donors and NGOs)</td></tr>
</table>

RESPONSIBLE DEVELOPMENT OF MARINE CAPTURE FISHERIES (Chapter 10 of the Master Plan)

Project 9

<table>
<tr><td colspan="2">Title of project. Feasibility assessment of the fishery sector</td><td colspan="2">Ref. in Master Plan – Chapters 10–12</td></tr>
<tr><td colspan="4">Project aim. Understand the economic feasibility of the marine fisheries fleets, fishing ports and aquaculture activities</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Investigate the economic feasibility of marine small-scale and industrial fleet modernization
• Investigate the costs and benefits of fishing port rehabilitation
• Investigate the potential and current feasibility of aquaculture hatcheries, feed production and farms
• Disseminate the findings of the studies</td><td>Ongoing activities
None at present
Before selling ports and fleet the Ministry of Economic Development assessed their economic value</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
Ministry of Economic Development, Institute of Economics, fishers' associations</td></tr>
<tr><td>Timetable
2005–2006</td><td>Indicators
Methodology developed for studies</td><td>Means of verification
Three reports
(one of each study)</td><td>Assumptions
Funds available
Staff (economists) contracted</td></tr>
<tr><td>Priority ranking
Highest</td><td>Estimated budget
200 000 lari</td><td colspan="2">Source of budget
Ministry of Agriculture</td></tr>
</table>

Project 10

<table>
<tr><td colspan="2">Title of project. Construction of repair yards for marine fishing vessels</td><td colspan="2">Ref. in Master Plan – Chapters 10–11</td></tr>
<tr><td colspan="4">Project aim. Improve the fishing vessel repair and maintenance infrastructure in the main Black Sea fishing ports</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Assess the need for vessel repair services in the various (fishing) ports on the Black Sea coast
• Construct new vessel repair and maintenance yards conforming to modern standards
• Construct, if feasible, small-scale ship-building facilities and engine repair services</td><td>Ongoing activities
Limited</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
Fishers' associations, port administration</td></tr>
<tr><td>Timetable
2006–2008</td><td>Indicators
Number of facilities improved and constructed</td><td>Means of verification
Facilities</td><td>Assumptions
Sufficient demand for a feasible repair service</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
1 000 000 lari</td><td colspan="2">Source of budget
Ministry of Agriculture</td></tr>
</table>

RESPONSIBLE DEVELOPMENT OF INLAND FISHERIES AND AQUACULTURE (Chapters 11 and 12 of the Master Plan)

Project 11

<table>
<tr><td colspan="2">Title of project. Fingerlings and feed research in aquaculture</td><td colspan="2">Ref. in Master Plan – 12.3(5)</td></tr>
<tr><td colspan="4">Project aim. Improve hatchery and fish feed production for aquaculture through research</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Carry out research into modern, environmentally sustainable hatchery technologies, management and selective breeding practices
• Carry out research into new commercial fish feeds for aquaculture
• Disseminate findings to the private sector</td><td>Ongoing activities
None</td><td>Responsible agency
Research institutes</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
DoF</td></tr>
<tr><td>Timetable
2005–2008</td><td>Indicators
New technologies</td><td>Means of verification
Research reports</td><td>Assumptions
Fishmeal should be available</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
400 000 lari</td><td colspan="2">Source of budget
DoF</td></tr>
</table>

Project 12

<table>
<tr><td colspan="2">Title of project. Poverty alleviation through aquaculture and inland fisheries development</td><td colspan="2">Ref. in Master Plan – 12.3(6)</td></tr>
<tr><td colspan="4">Project aim. Alleviate poverty and increase food security through aquaculture and inland fisheries development in areas with a large proportion of poor and vulnerable people</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Identification of areas with a large percentage of poor ethnic minorities where there are suitable conditions for aquaculture or inland fisheries
• Formulation of a strategy for poverty alleviation through aquaculture/inland fisheries
• Development of pro-poor, low cost, low input, low risk aquaculture and inland fisheries technologies
• Training of 1 000 poor households in aquaculture and inland fisheries techniques and marketing through farmer field schools or other extension methodologies</td><td>Ongoing activities
None</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
Can be linked with project entitled: “Aquaculture Development through Demonstration”</td><td>Supporting agencies
Ministry of Agriculture, Commune authorities</td></tr>
<tr><td>Timetable
2006–2008</td><td>Indicators
Percentage of poor people
Percentage of poor involved in aquaculture and/or inland fisheries</td><td>Means of verification
Poverty and livelihood analysis reports</td><td>Assumptions
Interest of poor people in inland fisheries and aquaculture</td></tr>
<tr><td>Priority ranking
Highest</td><td>Estimated budget
2 000 000 lari</td><td colspan="2">Source of budget
DoF and international donors</td></tr>
</table>

Project 13

<table>
<tr><td colspan="2">Title of project. Aquaculture development through demonstration</td><td colspan="2">Ref. in Master Plan – 12.1</td></tr>
<tr><td colspan="4">Project aim. Support the development of aquaculture through demonstration farms and training</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• establish four pilot demonstration farms at existing private aquaculture farms
• develop a practical training programme for aquaculture
• assist at least 300 interested entrepreneurs with training in aquaculture, pond management, fish health, economic analysis and business planning</td><td>Ongoing activities
None</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
Development and testing of new aquaculture technologies</td><td>Supporting agencies
Research institutes</td></tr>
<tr><td>Timetable
2005–2008</td><td>Indicators
Number of pilot demonstration farms
Number of persons trained
Number of new aquaculture entrepreneurs</td><td>Means of verification
Training materials
Contracts with demonstration farms
Training certificates</td><td>Assumptions
Persons interested in aquaculture
Availability of trainers</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
800 000 lari</td><td colspan="2">Source of budget
DoF, local government and donor agency</td></tr>
</table>

PRIVATIZATION, INVESTMENT AND ENTERPRISE DEVELOPMENT (Chapter 13 of the Master Plan)
Project 14

<table>
<tr><td colspan="3">Title of project. Increased fishery sector access to financial services</td><td>Ref. in Master Plan – 13.3(5)</td></tr>
<tr><td colspan="4">Project aim. Increase access and availability of credit, insurance and other financial services for fishers, fish processors, fish wholesalers and aquaculturists</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Carry out a sector credit needs assessment
• Investigate constraints for accessing credit and identify opportunities for increasing access
• Discuss with financial institutions and NGOs the possibilities for fishery sector stakeholders to access their credit schemes
• Train 200 fishery sector stakeholders in financial analysis and business planning for accessing credit schemes
• Encourage financial institutions to provide credit and other services to the fishery sector</td><td>Ongoing activities
Limited</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
Ministry of Finance, Ministry of Agriculture</td></tr>
<tr><td>Timetable
2006–2007</td><td>Indicators
Number of loans to the sector
Number of persons trained in business planning and financial analysis</td><td>Means of verification
Loan agreements
Credit policies of banks and NGOs</td><td>Assumptions
None</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
300 000 lari</td><td colspan="2">Source of budget
DoF, World Bank (potential), other international donors and NGOs</td></tr>
</table>

POST-HARVEST ACTIVITIES AND TRADE (Chapter 14 of the Master Plan)
Project 15

<table>
<tr><td colspan="3">Title of project. Fisheries marketing study</td><td>Ref. in Master Plan – 14.3(7)</td></tr>
<tr><td colspan="4">Project aim. Document the current situation of fishery products marketing in Georgia and identify opportunities for improvement and investment needs in this subsector</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Analysis of the current marketing system (structure, conduct, performance)
• Analysis of the fish supply chain and opportunities for improving the chain
• Identification of shortfalls with regard to the international market and World Trade Organization (WTO) requirements
• Analysis of investment and policy needs for further marketing improvement
• Formulation of an investment project proposal</td><td>Ongoing activities
None</td><td>Responsible agency
DoF</td></tr>
<tr><td>Prior activities required
None</td><td>Supporting agencies
Financial institutions and potential donors</td></tr>
<tr><td>Timetable
2006</td><td>Indicators
Methodology developed for studies</td><td>Means of verification
Report of study
Project proposal</td><td>Assumptions
None</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
400 000 lari</td><td colspan="2">Source of budget
World Bank (potential)</td></tr>
</table>

Project 16

<table>
<tr><td colspan="2">Title of project. Fishery products wholesale/retail market development</td><td colspan="2">Ref. in Master Plan – 14.3(7)</td></tr>
<tr><td colspan="4">Project aim. Develop fishery products wholesale/retail markets where products can be handled hygienically, roofed and equipped with ice, freezer, clean water, displays, electricity and other facilities to maintain quality and meet food safety requirements</td></tr>
<tr><td colspan="2" rowspan="2">Main activities to be undertaken
• Carry out an investment study (see project entitled “Fisheries marketing study”
• Construct wholesale/retail market(s)
• Train wholesale/retail market management
• Establish wholesale/retail market management structure</td><td>Ongoing activities
None</td><td>Responsible agency
Commune authorities</td></tr>
<tr><td>Prior activities required
Fisheries marketing study</td><td>Supporting agencies
DoF, sanitary inspection</td></tr>
<tr><td>Timetable
2007–2008</td><td>Indicators
Number of specialized fish wholesale/retail markets</td><td>Means of verification
Planning reports
Buildings and facilities</td><td>Assumptions
Demand for fishery products will increase</td></tr>
<tr><td>Priority ranking
High</td><td>Estimated budget
1 000 000 lari</td><td colspan="2">Source of budget
Commune authorities and international donors</td></tr>
</table>

Annex

PERFORMANCE INDICATORS

The following performance indicators will be monitored and reported on annually in order to measure the progress of each of the objectives.

State of resources

- Measures of biomass of coastal and offshore fishery resources
- Catch per unit effort from coastal, offshore and inland fisheries
- Monitoring the capture of bycatch of vulnerable species

Fishing pressure

- Total fishing effort
- Spatial and temporal distribution of fishing effort
- Total catch from small-scale, industrial and inland fisheries
- Number of small-scale and industrial vessels

Indicators of ecosystem health, based on international guidelines and extent and quality standards

- Wetlands
- Lagoons/estuaries

Ecosystem functioning

- Nutrient measures
- Biodiversity indicators/index
- Abundance of top predators
- Abundance of vulnerable species

Aquaculture

- Total aquaculture production
- Total fingerling production
- Number of aquaculture farms and hatcheries
- Diversity in aquaculture production
- Total production of commercial fish feed

Economic indicators

- Economic feasibility of fishing vessels/fleets and other fishery and aquaculture activities
- Income and income distribution of households that depend solely on fishing
- Income and income distribution of households that derive part of their income from non-fishing activities
- Percentage of fishery-dependent population living below the poverty line

Social indicators

- Education indicators
- Health indicators
- Gender indicators
- Employment indicators (figures in coastal communes)

- Number of fishers trained in fishing techniques
- Number of aquaculturists trained in modern aquaculture techniques and management

General indicators

- Total private and public investment in fisheries, aquaculture and processing
- Total private and public investment in fishery and aquaculture research
- Number of enterprises in fisheries and aquaculture
- Number of processing plants for fishery products and their total production (volume and value)
- Number of fish wholesalers and retailers
- Total import and export of fishery products
- Number of recreational fishers
- Total membership of fisheries and aquaculturist associations and cooperatives
- Type, number and size of fishery sector subsidies
- Number of hazard analysis and critical control point (HACCP) and International Organization for Standardization (ISO) certified fish processing companies
- Fish consumption per capita

LAW OF GEORGIA ON FISHERIES AND AQUACULTURE

I. GENERAL PROVISIONS

Introduction

1. This law provides for the sustainable development and responsible management of aquatic living resources in Georgian waters and in the territory of Georgia to ensure their optimum exploitation and utilization, while taking into account their conservation and the ecosystems to which they belong. This law also provides for the control of fishing and related activities carried out by Georgian flagged vessels on the high seas.

2. The annual determination of the total allowable catch or total allowable levels of fishing with respect to fish stocks, fishing and aquaculture in protected areas, the protection of endangered species, the introduction of exotic species of aquatic organisms and of genetically modified aquatic organisms, shall be regulated by the environmental laws of Georgia, or as provided in fisheries management agreements.

3. The transfer of aquaculture products from any location in Georgia to another, the import of live fish for the purpose of conducting aquaculture, the inspection, quarantine, disinfection and destruction of live fish and aquaculture products, as well as inspection and disinfection of aquaculture facilities shall be regulated by the veterinary laws of Georgia or as provided in fisheries management agreements.

Definitions

In this law:

"aquaculture"	means the cultivation, farming, propagation, raising and ranching of fish and aquatic plants in the territory and in Georgian waters
"aquaculture facility"	includes any equipment, construction or site in which aquaculture is conducted
"aquaculture product"	means the fish, or part thereof, or the aquatic plants, whether dead or live, which are being, or have been cultivated, farmed, propagated, raised or ranched within an aquaculture facility in the territory or in Georgian waters
"authorized officer"	means, as the case may be, any fisheries officer referred to in section 52 of this Law, any staff member or official of the Ministry of Interior, or any person or class of person who is a member of the enforcement authority of a foreign State or of any regional

	or subregional organization, referred to in section 52 of this Law
"commercial fishing"	means fishing for the purpose of selling the fish caught
"Compliance Agreement"	means the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, adopted by the Conference of the Food and Agriculture Organization of the United Nations on 24 November 1993 and entered into force on 24 April 2003
"culture based fisheries"	means fisheries which are maintained by stocking with material originating from aquaculture facilities
"driftnet"	means a gillnet or other net or a combination of nets which is more than one kilometre in length, the purpose of which is to enmesh, entrap or entangle fish by drifting on the surface of or in the water
"Exclusive Economic Zone"	shall have the same meaning as in the Law on Maritime Areas, as amended from time to time
"FAO"	means the Food and Agriculture Organization of the United Nations
"fish"	means any aquatic animal, and includes marine mammals, shellfish, turtles, lobsters, crabs, their young and their eggs
"fish aggregating device"	means any man-made or partly man-made floating or submerged device, whether anchored or not, intended for the purpose of aggregating fish and includes any natural floating object on which a device has been placed to facilitate its location
"fisheries officer"	means any professional fisheries officer in the employment of the Ministry
"fishery"	means one or more stocks of fish or fishing operations based on such stocks which can be treated as a unit for purposes of conservation, development and management,

	taking into account geographical, scientific, technical, recreational, economic and other relevant characteristics
"fishery product"	means any fish or aquaculture product that has been canned, dried, gutted, salted, iced, chilled, frozen or otherwise processed
"fishing"	means: a. searching for, catching, taking, killing and harvesting fish b. attempting to search for, catch, take, kill and harvest fish c. engaging in any other activity which can reasonably be expected to result in the locating, catching, taking, killing or harvesting fish
"fishing vessel"	includes any vessel used for fishing or related activities
"Fishing Vessel Register"	means the register of fishing vessels established and maintained by the Georgian Maritime Transport Administration for purposes of operation, seaworthiness and safety
"fish processing establishment"	means any land, premises or other place on or in which: a. fish or aquaculture products are packaged, canned, dried, gutted, salted, iced, chilled, frozen or otherwise processed for sale in and outside Georgia b. fish and aquaculture products are stored for the purpose of canning, drying, gutting, salting, icing, chilling, freezing or otherwise for processing for sale in and outside Georgia
["Fish Stocks Agreement"]	[means the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the conservation and management of straddling fish stocks and highly migratory fish stocks

	done at New York on 4 December 1995 and includes amendments to the Fish Stocks Agreement]
"foreign fishing vessel"	means any fishing vessel other than a local fishing vessel or a high seas fishing vessel and includes any locally based foreign fishing vessel
"Georgian waters"	means the waters of the Exclusive Economic Zone, territorial sea and adjacent zones as defined in the Law on Maritime Areas, as amended from time to time, internal waters and any other waters over which Georgia claims jurisdiction
"high seas fishing vessel"	means any vessel that has acquired formal Georgian nationality through registration in accordance with the Maritime Code, as amended from time to time, and is entitled to fly the flag of Georgia, and is used for fishing or related activities on the high seas
infected organism	means that germs or other living organisms or factors have caused a transmutation to the organism's natural anatomy or physiology
"international conservation and management measures"	means conservation and management measures established by international agreements which Georgia has agreed to apply or to which Georgia is a party
"local fishing vessel"	means any fishing vessel wholly owned and controlled by: a. the Government of Georgia, or an agency thereof b. one or more natural persons who are Georgian citizens c. a corporate entity established under the laws of Georgia, which is wholly owned and controlled by one or more of the entities or persons described under a. and b. and shall exclude any fishing vessel which may be so owned and controlled that does not have a genuine and effective link with

	Georgia, including where it is not based in Georgia and/or where a substantial portion of its financial and economic profits and other benefits arising from its operations in the Georgian waters do not directly benefit the owners or the economy of Georgia
"locally based foreign fishing vessel"	means any foreign fishing vessel which: (a) is based in and fully controlled or operated from Georgia and (b) engages in fishing in Georgian waters and (c) lands all of its catch or a substantial part of its catch in Georgia. and includes foreign fishing vessels chartered by a Georgian national or a Georgian company
"master"	means any person holding the most responsible position at any given time on board of a vessel
"Ministry" and "Minister"	means the ministry and minister responsible for the management and development of fisheries and aquaculture
"operator"	means any person who is in charge of or directs or controls a vessel, or for whose direct economic or financial benefit a vessel is being used, including the master, owner and charterer
"person"	includes a natural person or a corporate entity
"related activities"	means: a. transhipping of fish to or from any vessel b. storing, processing or transporting fish from the time of catching or taking c. re-fuelling or supplying fishing vessels or performing other activities in support of fishing operations

	d. attempting to or preparing to do any of the above
"sports fishing"	means fishing for the purpose of recreation and not for the purpose of selling the fish caught
"subsistence fishing"	means fishing for the primary purpose of providing food for personal consumption and does not include the sale, exposure for sale or barter of the fish caught
"territory"	means the territory of Georgia as defined in the Constitution of Georgia, as amended from time to time
"vessel"	means any boat, ship or other water going craft
"vessel monitoring system" or "VMS"	means a reporting system capable of monitoring fishing and related activities of fishing vessels including but not limited to the determination of a vessel's identity, position, course, speed and special codes and may include the use of automatic location devices or satellite communication systems.

II. ADMINISTRATION

A. RESPONSIBILITY AND FUNCTIONS

4. The Ministry shall have exclusive responsibility for the management and development of fisheries and aquaculture in accordance with this Law and other laws of Georgia.

5. The functions of the Ministry shall be to:

   (a) formulate and implement policies and plans for the responsible management and sustainable development of fisheries and aquaculture in a manner most beneficial to Georgians;

   (b) make regulations to carry out the purpose and provisions of the Law;

   (c) issue permits in accordance with this Law or any regulation made under this Law;

(d) participate in the planning and execution of projects, programs, or other activities related to fishing or aquaculture;

(e) negotiate on behalf of the Government of Georgia and in consultation with the Fishery Advisory Board fisheries management agreements and access agreements, and implement such agreements;

(f) participate on behalf of the Government of Georgia and in consultation with the Fishery Advisory Board in appropriate sub-regional, regional and international organizations and arrangements relating to fisheries or aquaculture;

(g) promote scientific research and the development of appropriate technologies in support of the conservation, management and development of fisheries and aquaculture;

(h) promote the formation of fishermen cooperatives, fishermen associations or other bodies representing fishermen;

(i) collect and share in a timely manner and in accordance with fisheries management agreements and international law, complete and accurate data concerning fisheries and aquaculture activities as well as information from national and international research programmes;

(j) plan and implement a system of monitoring, control and surveillance to promote compliance with the Law and, within its competence, enforce the Law.

B. DELEGATION

6. The Ministry may delegate certain functions referred to in section 3 of this Law to its regional offices or to local government authorities for the purpose of local management.

7. Any delegation of management functions as referred to in subsection (1) shall include a description of the rights and obligations of the regional office or of the local government authority concerned.

C. FISHERY ADVISORY BOARD

8. The Ministry shall establish a Fisheries Advisory Board which shall advise the Ministry on:

(a) policies for the sustainable development and responsible management of fisheries and aquaculture;

(b) the coordination of such policies with other ministries and government organizations having a legitimate interest in fisheries and aquaculture;

(c) the negotiation of fisheries management agreements and the participation in appropriate sub-regional, regional and international organizations and arrangements relating to fisheries or aquaculture;

(d) any matter on which consultation of the Board is required under this Law.

9. The members of the Board shall consist of representatives of the ministries and other government organizations having a legitimate interest in the fisheries and aquaculture sector.

10. The Ministry shall issue regulations with respect to constitution, membership, internal procedures, meetings and decisions of the Board as well as any other matter related to its functioning.

D. AUTONOMOUS REPUBLICS ABKHAZIA AND ADJARA

11. The responsibilities of the autonomous Republics Abkhazia and Adjara related to the management and development of fisheries and aquaculture shall be defined by the Constitution of Georgia, this Law and other laws of Georgia.

12. The autonomous Republics Abkhazia and Adjara shall participate in the management and development of fisheries and aquaculture through their relevant State bodies.

III. FISHERIES MANAGEMENT AND DEVELOPMENT

A. GUIDING PRINCIPLES

In the exercise of any functions and powers under this Law or any regulation made under this Law, the Ministry shall consider and give priority to the following guiding principles:

(a) ensuring the long-term conservation and sustainable use of the aquatic living resources to meet the needs and aspirations of present and future generations;

(b) avoiding, minimizing and mitigating the adverse effects of fishing, related activities and aquaculture on the aquatic environment;

(c) conserving the biodiversity of the aquatic living resources, their ecosystems and habitats;

(d) conserving the aquatic ecosystems as a whole, including the species targeted and non-targeted for exploitation and their associated or dependent species;

(e) applying precautionary approaches to the management and development of fisheries and aquaculture;

(f) promoting, to the extent practicable, broad and accountable participation in the management and development of fisheries and aquaculture;

(g) taking into account the interests of artisanal and subsistence fishing;

(h) ensuring that any management measures allow for the implementation of relevant international agreements to which Georgia is party or has consented to be bound.

B. OBJECTIVES

The Ministry shall take into account the following objectives for the responsible management and sustainable development of fisheries and aquaculture:

(a) establish priorities for the utilization of the fisheries resources which will provide for the greatest overall benefits for Georgia;

(b) prevent or eliminate over-fishing and ensure that levels of fishing effort do not exceed those commensurate with sustainable use of fisheries resources;

(c) base management practices on sound management principles and the best scientific information available, to be gained through national and international research programmes;

(d) minimise, to the extent practicable, fishing conflicts among users;

(e) develop the fisheries and aquaculture sector in accordance with the best interests of Georgia;

C. DETERMINATION OF PARTICIPATORY RIGHTS

The Ministry may determine participatory rights in a fishery, such as allocations of the total allowable catch or of the total allowable level of fishing. Such allocations shall be consistent with the fisheries management and development plan and may:

(a) favour Georgian nationals and local fishing vessels;

(b) include restrictions as to vessel type, gear type, seasons of operations, areas in which fishing can take place;

(c) include any other restriction relevant to fisheries management and development;

D. FISHERIES MANAGEMENT AND DEVELOPMENT PLAN

13. The Ministry shall prepare, implement and keep under review, as appropriate, plans for the responsible management and sustainable development of fisheries and aquaculture.

14. The plans referred to in subsection (1) shall be approved by the Minister.

15. The plans shall:

(a) identify each fishery and indicate its present state of exploitation;

(b) indicate the present state of exploitation of aquaculture activities and identify areas for development of aquaculture activities;

(c) specify the objectives to be achieved in the management and development of each fishery and of aquaculture activities;

(d) specify the management and development measures to be taken;

(e) specify the licensing programmes to be followed for each fishery and for aquaculture activities, the limitations, if any, to be applied to local fishing operations and the amount of fishing, if any, to be allocated to foreign fishing vessels;

(f) such other details as are considered necessary.

16. In the preparation and review of each plan, the Ministry shall consult, as appropriate, with:

(a) other ministries and government agencies, including any local authorities, concerned or affected by the plan;

(b) fishermen cooperatives, fishermen associations or other bodies representing fishermen;

(c) fisheries management bodies of other states in the Black Sea region as well as regional or sub-regional fisheries organizations, with a view to ensuring the harmonisation of their respective fisheries management and development plans;

(d) other persons or groups of persons affected by the plan.

17. There may be established under a plan, a management committee that shall be:

(a) primarily responsible for the implementation and review of the plan or perform such other duties and responsibilities as are given to it under the plan consistent with this Law;

(b) constituted as the Ministry deems appropriate, or as specified under the plan.

E. FISHERIES MANAGEMENT AGREEMENTS AND ARRANGEMENTS

The Ministry may on behalf of the Government of Georgia and in consultation with the Fishery Advisory Board negotiate agreements or arrangements with other States in the Black Sea region or with regional or sub-regional fisheries organizations providing for, *inter alia:*

(a) the establishment and operation of joint or regional bodies, commissions or other institutional arrangements responsible for fisheries management and development;

(b) the harmonization of systems for the collection of statistics, and the carrying out of surveys and procedures for assessing the state of fish stocks;

(c) the harmonization of terms and conditions of access and licensing procedures in respect of foreign fishing vessels;

(d) the taking and harmonization of enforcement measures;

(e) other measures for fisheries management and development;

(f) implementation of international law or agreements to which Georgia is a party.

F. REGULATIONS

18. The Ministry may issue regulations for the management and development of fisheries concerning:

    (a) the establishment of open or closed seasons, as determined by the Ministry, for any specified area, for any fish stock and any period of time;

    (b) the taking, from any area, of fish that are less or greater than a specified size, weight or dimension;

    (c) the taking of fish from any area:

        i. by a specified method, gear, equipment or instrument;
        ii. by a specified class of persons;
        iii. by a specified class of vessels;

    (d) the landing, sale, display or offering for sale, transporting, receiving or possession of fish.

19. It is prohibited, with or without the use of a fishing vessel, to act in contravention of any regulation referred to in subsection (1).

20. It is prohibited to possess, land, sell, trade, offer for sale, or attempt to sell, trade or offer for sale any fish, which were taken in contravention of any regulation referred to in subsection (1).

G. FISHING WITH POISONS OR EXPLOSIONS

21. It is prohibited to use, permit to be used or attempt to use any chemical, poison or noxious substance or material whether of manufactured or natural origin, dynamite or explosive substance or device for the purpose of killing, taking, stunning, stupefying or disabling fish or in any way rendering fish more easily caught.

22. It is prohibited to possess, land, sell, trade, offer for sale, or attempt to sell, trade or offer for sale any fish or fishery product taken in contravention of subsection (1).

H. DRIFTNET FISHING

It is prohibited to engage or attempt to engage in any driftnet fishing activities.

I. FISHING GEAR AND OTHER NON-BIODEGRADABLE ITEMS

23. It is prohibited to leave any fishing gear or other non-biodegradable items utilized for fishing in the Georgian waters on the termination of fishing.

24. The master of a fishing vessel shall remove or cause to be removed any fishing gear or other non-biodegradable items referred to in subsection (1) left in Georgian waters. Any costs in connection with such removal shall be borne by the operator of the fishing vessel to which the fishing gear or items belong.

25. The Ministry may cause to be removed any fishing gear or any other non-biodegradable items referred to in subsection (1) left in Georgian waters. Any costs incurred in connection with such removal may be recovered by the Ministry from the operator of the fishing vessel to which the fishing gear or items belong.

J. WASTE

26. It is prohibited to discharge into the Georgian waters waste generated on a fishing vessel, except biodegradable household waste or fish offal.

27. Waste other than biodegradable household waste or fish offal, shall be taken into port or fish landing sites and disposed of in a manner satisfactory to the authority responsible for disposal of waste in the port or fish landing site in which such waste is landed.

IV. GENERAL PERMIT REQUIREMENTS

A. REGISTRATION

28. No fishing vessel shall be operated in or outside Georgian waters for fishing or related activities and no permit shall be issued for such vessel unless it has been registered in the Fishing Vessel Register.

29. Local fishing vessels used for fishing in inland waters, culture based fisheries, sports fishing and subsistence fishing as well as foreign fishing vessels registered on a regional register of fishing vessels maintained under a fisheries management agreement or arrangement are exempted from the requirement in subsection (1).

30. The Ministry may exempt local fishing vessels under a certain length from the requirement in subsection (1).

31. The requirement of registration in the Fishing Vessel Register is in addition to and not in derogation of any other vessel registration requirements.

B. PROHIBITION AND REGULATIONS

32. It is prohibited, with or without the use of a vessel, to engage in any fishing, related activity or other activity regulated under this Law :

    (a) without an appropriate permit issued under this Law;

    (b) contrary to the term and conditions of a permit issued under this Law;

    (c) contrary to the requirements of this Law.

33. The Ministry may, in addition to the types and classes of permits provided for under this Law, prescribe different classes or types of permits for fishing, related activities and any other activities regulated under this Law.

34. The Ministry may issue regulations prescribing:

    (a) procedures, forms and other requirements for the application of permits;

    (b) terms, forms and other conditions of permits;

    (c) matters to be considered in determining whether to issue, refuse, renew, suspend or cancel the permit.

C. APPLICATION

An application for a permit shall be made in the prescribed form to the Ministry.

D. CONSIDERATIONS

In considering an application for a permit, the Ministry shall, as the case may be, take into consideration:

(a) the national fisheries policy and development objectives;

(b) the relevant fisheries management and development plan.

E. CONDITIONS

Every permit shall be subject to such conditions as may be prescribed or endorsed on the permit, including, but not limited to the foregoing, conditions relating to:

(a) the type and method of fishing or aquaculture;

(b) the type of related activities authorized;

(c) the areas within which fishing, related activities or other activities regulated under this Law are authorized;

(d) the periods during which fishing, related or other activities regulated under this Law are authorized;

(e) the target species and amount of fish or other living aquatic resources authorized to be taken, including any restriction on minimum measures and by-catch;

(f) the landing of fish or other living aquatic resources caught under the authority of the permit;

(g) the reporting of information in such form and such frequency as determined by the Ministry;

(h) the installation of automatic location communicators and other specified machinery or equipment necessary for the operation of a vessel monitoring system in respect of the fishing vessel.

F. DURATION

A permit, unless earlier cancelled or suspended in accordance with section 25 of this Law, shall be valid for the prescribed period.

G. TRANSFERABILITY

No permit shall be transferable unless otherwise authorized in writing by the Ministry.

H. PERMIT FEE

35. The applicant of every permit shall be subject to the payment of a permit fee.

36. The level of the applicable permit fee shall be determined by the Ministry in consultation with the Fishery Advisory Board and shall be defined in a schedule to this Law.

37. In determining the level of the applicable permit fee the Ministry shall take into consideration:

    (a) the tax or fee, if any, to be paid for the use of natural resources in accordance with the laws of Georgia;

    (b) the quantity of the fish species being sought;

    (c) the market value of the fish species being sought;

    (d) the cost of fisheries management and development;

38. Permits issued under this Law to foreign fishing vessels may be subject to other charges as may be provided in the applicable access agreement entered into in accordance with section 34.

39. No permit shall be issued unless the applicable permit fee has been paid.

I. AMENDMENT, SUSPENSION, RENEWAL AND CANCELLATION

40. The Ministry may amend, suspend, decide not to renew or cancel a permit issued under this Law where the holder of the permit:

    (a) has furnished information which is untrue or incomplete in connection with his application for a permit;

    (b) contravenes or fails to comply with any condition of the permit, and, where appropriate, has failed to remedy such non-compliance;

    (c) contravenes or fails to comply with a provision of this Law, any regulations made under this Law or any other law of Georgia;

    (d) is convicted of an offence under this Law.

41. The Ministry may amend, suspend, decide not to renew or cancel a permit issued under this Law where the fishing vessel in respect of which the permit has been issued has been used in contravention of this Law or of any regulation made under this Law or of any condition of the permit.

J. RECORD

The Ministry shall keep a record of permits issued under this Law.

V. FISHING IN GEORGIAN WATERS

A. LOCAL FISHING VESSELS

42. No local fishing vessel shall be used for undertaking any commercial fishing or related activities in Georgian marine waters without having on board a local fishing vessel permit.

43. A local fishing vessel permit shall be issued in respect of the local fishing vessel - to be specified in the permit - in the name of the owner or charterer of that vessel.

44. A local fishing vessel permit shall be valid only for the areas, the fishery or fisheries, the method or methods of fishing and the type and quantity of fishing gear endorsed on the permit.

45. Where a local fishing vessel becomes a foreign fishing vessel, the local fishing vessel permit shall automatically terminate.

B. INLAND FISHING

46. No person or group of persons shall, with or without the use of a vessel, undertake any commercial fishing in Georgian inland waters without an inland fishing permit.

47. An inland fishing permit shall be valid only for the areas, the fishery or fisheries, the method or methods of fishing and the type and quantity of fishing gear endorsed on the permit.

C. CULTURE BASED FISHERIES

48. No person or group of persons shall, with or without the use of a vessel, undertake any culture based fisheries in Georgian waters without a culture based fisheries permit.

49. A culture based fisheries permit confers upon the permit holder an exclusive right to release and harvest aquaculture products within the natural environment defined in the permit.

50. A culture based fisheries permit shall be valid only for the areas, the fishery or fisheries, the method or methods of fishing and the type and quantity of fishing gear endorsed on the permit.

D. SPORTS FISHING

51. No person or group of persons shall, with or without a fishing vessel, undertake any sports fishing in Georgian waters without a sports fishing permit.

52. A sports fishing permit shall be valid only for the areas, the fishery or fisheries, the method or methods of sports fishing and the type and quantity of sports fishing gear endorsed on the permit.

E. SUBSISTENCE FISHING

Subsistence fishing in Georgian waters may take place at any time and without any of the permits referred to in the sections 27-30 of this Law subject to regulations as may be issued by the Ministry.

VI. FOREIGN FISHING IN THE EXCLUSIVE ECONOMIC ZONE

A. ACCESS AGREEMENT

53. The Ministry may on behalf of the Government of Georgia negotiate bilateral or multilateral agreements with other States, intergovernmental organizations or with associations representing foreign fishing vessel owners or charterers, providing for the allocation of fishing rights to the vessels from those States, organizations or associations in the Exclusive Economic Zone of Georgia.

54. For the purpose of this section, the term inter-governmental organization includes any inter-governmental organization to which the power to negotiate access agreements has been delegated by the member states of that organization.

55. The fishing rights allocated under any access agreement shall not exceed the total resources or the amount of fishing allowed to the appropriate category of foreign fishing vessels under the fisheries management and development plan referred to in section 10 of this Law.

56. Any access agreement entered into shall include a provision:

    (a) establishing the responsibility of the foreign State, organization or association to take necessary measures to ensure compliance by its vessels with the terms and conditions of the agreement and the laws and regulations of Georgia;

    (b) granting the right to the Government of Georgia to terminate the agreement according to its terms or upon non-compliance by the other party with any requirement of the access agreement or the laws and regulations of Georgia;

    (c) granting the right to the Government of Georgia to suspend the agreement upon its determination that continued fishing at current levels would seriously threaten the fish stocks.

B. FOREIGN FISHING VESSELS

57. No foreign fishing vessel shall be used for undertaking fishing or related activities in the Exclusive Economic Zone of Georgia without having on board a foreign fishing vessel permit.

58. A foreign fishing vessel permit shall be issued in respect of the foreign fishing vessel - to be specified in the permit - in the name of the owner or charterer of that vessel.

59. No foreign fishing vessel permit shall be issued in respect of any foreign fishing vessel unless there is in force an applicable access agreement referred to in section 32 of this Law.

60. An application for a foreign fishing vessel permit may be refused or withdrawn on any grounds as may be prescribed, and in particular if:

    (a) international agreements to which Georgia is a party make this necessary;

    (b) the foreign fishing vessel or the operator has a record of undermining the effectiveness of international conservation and management measures, or of having taken part in illegal fishing in Georgian waters, the waters of another State or in international waters.

61. A foreign fishing vessel permit shall be subject to such conditions as may be prescribed, and in particular to the conditions that:

    (a) it shall only be used for such fishing and related activities, during such period, for such species, with such fishing gear and in such places as are specified in the permit;

    (b) all provisions of this Law and any regulations made under this Law shall be complied with;

62. Where the terms of an access agreement authorizes an administrator to issue a permit for fishing in accordance with its terms in the Exclusive Economic Zone of Georgia and a valid and applicable permit has been duly issued by such administrator, the vessel is deemed to be permitted under this Law and according to the terms of the access agreement and the permit.

63. A foreign fishing vessel permit shall be valid for a period of not more than one year from the date of its issuance. In no event shall the term of a foreign fishing vessel permit exceed the term of the applicable access agreement.

VII. TRANSHIPMENT

A. TRANSHIPMENT PERMIT

64. Unless otherwise specifically authorized by the Ministry or under an applicable access agreement, no transhipment of any fish or fishery product may be carried out at any other place than inside a port or a landing site in Georgia without having on board a transhipment permit.

65. The application for the permit referred to in subsection (1) shall be made not less than 24 hours prior to the date specified in the application on which such transhipment is to take place.

66. The permit shall be issued in respect of the vessel authorized to tranship – to be specified in the permit - in the name of the owner or charterer of that vessel.

67. A permit to tranship shall be valid only:

(a) in respect of the vessel specified in the permit;

(b) for a fixed period as specified in the permit;

(c) for a fixed number and fixed quantity, or both a fixed number and a fixed quantity, of transhipments of fish products, as specified in the permit;

(d) for a fixed place or fixed places of transhipment, and involving the vessels specified in the permit.

68. No transhipment of any fish or fishery product may be carried at any time without the supervision of fisheries observers working under the observer programme referred to in section 49 of this Law.

69. Any costs of transport, accommodation or other expenditure pertaining to the supervision referred to in subsection (5) shall be borne by the owner or charterer of the vessel from which the transhipment is undertaken.

B. LAWS OF OTHER STATES

It is prohibited to land or tranship in the territory or in Georgian waters any fish that has been caught contrary to the law of another State or contrary to international conservation and management measures.

VIII. HIGH SEAS FISHING

A. HIGH SEAS FISHING VESSELS

70. No high seas fishing vessel shall be used for undertaking any fishing or related activities on the high seas without having on board a high seas fishing vessel permit.

71. A high seas fishing vessel permit shall be issued in respect of the vessel - to be specified in the permit - in the name of the owner or charterer of that vessel.

72. The high seas fishing vessel permit shall be subject to such conditions as it may specify or as may be prescribed. The conditions may be varied at any time and shall be notified to the holder of the permit as soon as practicable.

73. A high seas fishing vessel permit shall not be issued, if:

(a) the vessel has not acquired formal Georgian nationality through registration in accordance with the Maritime Code, as amended from time to time;

(b) the Ministry is not satisfied that Georgia is able to ensure the effective implementation of the Compliance Agreement [and the Fish Stocks

Agreement?] and other international conservation and management measures with respect to the vessel;

(c) the vessel has engaged in activities undermining the effectiveness of international conservation and management measures;

(d) the Ministry is bound to do so under any international agreement to which Georgia is a party.

74. Without prejudice to the provisions of sections 25 of this Law, a high seas fishing vessel permit may be suspended, not renewed or cancelled if the vessel:

(a) has been used in contravention of this Law, any regulation made under this Law or any conditions of the permit;

(b) has engaged in activities undermining the effectiveness of international conservation and management measures;

(c) at any time, if the Ministry determines that it is unable to exercise effectively its responsibilities in respect of the high seas fishing vessel under international law.

75. A high seas fishing vessel permit shall be valid for a period of not more than one year from the date of its issuance.

76. A high seas fishing vessel permit shall be automatically terminated in the event that the vessel in respect of which it was granted is no longer entitled to fly the flag of Georgia.

B. HIGH SEAS FISHING VESSEL PERMIT RECORD

77. The Ministry shall maintain a record of high seas fishing vessels in respect of which permits have been issued including all information relating to the vessel as may be required under this law.

78. The Ministry shall make available, convey or provide such information as may be prescribed to FAO and inform or notify FAO of any additions, deletions or amendments to the record.

79. The Ministry shall make available on request the information maintained under subsection (1) to any directly interested foreign State which is a party to the Compliance Agreement [and the Fish Stocks Agreement?] and to any sub-regional or regional fisheries management organization or arrangement.

IX. AQUACULTURE

A. AQUACULTURE PERMIT

80. No person shall engage in aquaculture in the territory or in Georgian waters without an aquaculture permit.

81. An aquaculture permit may be issued provided that:

(a) the applicant has complied with all other laws of Georgia, in particular those relating to the use of land and water, the protection of the environment and the prevention of fish disease;

(b) where the proposed aquaculture activity requires an environmental impact assessment, an environmental clearance for the project has been issued in accordance with the laws of Georgia.

B. EXCLUSIVE RIGHT

An aquaculture permit confers upon the permit holder an exclusive right to farm and harvest aquaculture products within the aquaculture facility defined in the permit.

C. CONDITIONS

An aquaculture permit may be subject to any conditions, which may be prescribed or endorsed on the permit, including but not limited to conditions relating to the species which may be cultured.

D. FISHING AND PASSAGE CLOSE TO AQUACULTURE FACILITIES

No person shall fish closer to an aquaculture facility than 100 meters or pass such facility closer than 20 meters. The Ministry may issue regulations prescribing limitations to fishing and related activities in the adjoining area.

E. PROHIBITIONS

It is prohibited to:

(a) sell, trade, offer for sale, or attempt to sell trade or offer for sale, any aquatic organism infected or thought to be infected with a disease or an infected organism;

(b) use in the aquaculture process any inputs, substances or production methods that may render aquaculture products unsuitable for human consumption;

X. FISHING AND AQUACULTURE FOR RESEARCH PURPOSES

A. RESEARCH PERMIT

82. Fishing or aquaculture undertaken for:

(a) conducting scientific research and survey or

(b) exploring the commercial viability and biological sustainability of an aquaculture technique, a fishing method or fishing gear not ordinarily used in Georgian waters

shall be subject to an explanatory permit to be issued by the Ministry.

83. The explanatory permit shall only be issued if:

(a) where the proposed research or survey requires an environmental impact assessment, an environmental clearance for the research or survey has been issued in accordance with the laws of Georgia;

(b) the applicant has complied with all other environmental laws of Georgia.

84. The explanatory permit shall be issued for a fixed period and may be subject to any condition as the Ministry may determine including, but not limited to, the condition that the results conclusions and benefits derived from the research will be shared with the Ministry.

XI. POST HARVEST OPERATIONS

A. FISH PROCESSING

The Ministry may require a person who operates a fish processing establishment to obtain a fish processing permit in order to control and ensure the quality and safety of fishery products to be sold or offered for sale in or outside Georgia.

B. EXPORT

85. The Ministry may require a person who exports fish or fishery product to obtain a fish export permit.

86. The Ministry may issue regulations prohibiting, restricting or controlling the export from the territory of Georgia or from the Georgian waters of any prescribed species, type or size of fish, fishery product or other aquatic organism where in its opinion, such action is required:

(a) to control and ensure the quality and safety of fishery products that are exported by, inter alia:

i. setting seafood safety and other standards;
ii. registering the export and exporters of fishery products;

(b) to protect the supply of fish for the domestic market;

(c) in the interest of the sustainable development and conservation of a fishery.

XII. MONITORING, CONTROL AND SURVEILLANCE

A. MCS SYSTEM

The Ministry shall, in consultation with other ministries and government organizations, as appropriate, plan and implement a system of monitoring, control and surveillance to promote compliance with the Law.

B. COLLECTION OF DATA AND STATISTICS

The Ministry shall collect and share in a timely manner and in accordance with fisheries management agreements and international law, complete and accurate data and statistics concerning fishing and aquaculture activities on, inter alia, vessel position, catch of target and non target species, as well as information from national and international research programmes.

C. PROVISION OF INFORMATION

87. Any operator of a vessel and any person engaged in fishing, related or other activities regulated under this Law shall provide to the Ministry or a fisheries observer referred to in section 49 of this Law or an authorized officer referred to in section 52 of this Law such records, data and information pertaining to such activities and in such form and means as may be prescribed by the Ministry or a fisheries observer or an authorized officer.

88. Any person who receives information pursuant to this Law shall keep this information confidential where this is indicated or where he should reasonably understand that the information received is of a confidential nature.

89. It is prohibited to provide false information to the Ministry or a fisheries observer referred to in section 49 of this Law or an authorized officer referred to in section 52 of this Law pertaining to fishing, related or other activities, or to refrain from providing information as may be required under this Law or any regulation made under this Law or pursuant to any request from the Ministry or a fisheries observer or an authorized officer to do so.

D. OBSERVER PROGRAMME

90. The Ministry shall plan and manage an observer programme to monitor fishing and any related activities conducted in Georgian waters and appoint such persons as it considers fit to be fisheries observers.

91. For the purposes of a fisheries management agreement or arrangement as referred to in section 11 of this Law or an access agreement referred to in section 32 of this Law, any observer appointed in accordance with such agreement or arrangement shall be deemed to be a fisheries observer appointed in accordance with this Law and this section shall apply to such observer in the performance of his duties as if he were so appointed subject to such terms and conditions as may be prescribed by the Ministry.

92. Any person on board of any vessel in respect of which a permit has been issued under this Law shall permit a fisheries observer to board and remain on such vessel for the purposes of carrying out his duties and functions.

93. The operator and each member of the crew of such vessel shall allow and assist any fisheries observer to carry out all his duties and functions in accordance with this Law and as may be prescribed.

94. The operator and each member of the crew of any vessel shall immediately comply with every lawful instruction or direction given by a fisheries observer and facilitate safe boarding and inspection of the vessel, its fishing gear, equipment, records, fish and fish products.

95. The operator and each member of the crew of any fishing vessel shall take all measure to ensure the safety of a fisheries observer in the performance of his duties.

96. It is prohibited to assault, obstruct, resist, delay, refuse boarding to, intimidate or fail to take all measures to ensure the safety of or otherwise interfere with a fisheries observer in the performance of his duty, or to fail to comply with any lawful instructions or direction given by a fisheries observer.

XIII. ENFORCEMENT

A. ASSUMPTIONS

97. The catch found on board of any vessel used in the commission of an offence under this Law shall be presumed to have been taken in contravention to this Law or any regulations made under this Law.

98. Any chemical, poison or noxious substance or material, whether of manufactured or natural origin, dynamite or explosive substance or device found on board of any fishing vessel shall be presumed to be intended for the purpose of killing, taking,

stunning, stupefying or disabling fish or in any way rendering fish more easily caught.

99. The catch found on board of any fishing vessel not complying with the stowage gear requirements provided for in section 51 of this Law shall be presumed to have been taken in Georgian waters and in contravention to this Law or any regulations made under this Law.

B. STOWAGE OF GEAR

100. Whenever a fishing vessel is in Georgian waters in an area in which it is not authorized by a permit issued or required under this Law to undertake any fishing or related activities, any fishing gear or other specified implements on board of such vessel shall, while the vessel is in such area, be dismantled, stowed or secured in such manner as not be readily available for fishing.

101. It is prohibited for the operator of a fishing vessel to be in an area as referred to in subsection (1) without having its fishing gear or other specified implements dismantled, stowed or secured as prescribed.

C. AUTHORIZED OFFICERS

102. The Ministry may for the purpose of ensuring compliance with this Law designate in writing any fisheries officer as an authorized officer under this Law and may prescribe the duties, responsibilities and qualifications of such officer.

103. The Ministry may on behalf of the Georgian Government designate any person or class of person who is a member of the enforcement authority of a foreign State or of any regional or sub-regional organization to be a foreign authorized officer for the purpose of this Law.

104. Where the Ministry designates members of the enforcement authority of a foreign State or of any regional or sub-regional organization to be foreign authorized officers for the purpose of this Law, it shall also specify whether the powers of such persons apply in Georgian waters.

105. Any authorized officer in exercising any of the powers conferred on him by this Law shall on demand produce identification to show he is an authorized officer under this Law.

D. BOARDING OF A FISHING VESSEL

106. An authorized officer may where he has reasonable grounds to believe that an offence has been committed under this Law and in accordance with the laws of Georgia:

(a) stop, board and search:

i. within the Georgian waters any fishing vessel;

ii. on the high seas, any high seas fishing vessel or any other fishing vessel flying the flag of a State party to an international agreement to which Georgia is a party and which provides for such stopping, boarding and searching;

(b) in the territory and aboard any vessel boarded under subsection (a):

i. require to be produced, examine and make copies of any authorization (license or permit), logbook or any other document required under this Law;
ii. require to be produced and examine any net or other fishing gear and any fish or fishery product;

107. The master and each member of the crew of any fishing vessel shall immediately comply with every instruction or direction given by an authorized officer and facilitate safe boarding, entry and inspection of the fishing vessel and of any fishing gear, equipment, records, and fish and fishery products.

108. The master and each crew member of any high seas fishing vessel ordered to stop by an authorized officer of a State party to an international agreement to which Georgia is a party and which provides for such stopping and boarding shall facilitate safe boarding, entry and inspection of the vessel and of any fishing gear, equipment, records, fish and fishery products.

109. The master and each crew member of any fishing vessel shall take all measures to ensure the safety of the authorized officers in the performance of their duties.

110. It is prohibited to assault, obstruct, resist, delay, refuse boarding or entry, intimidate or fail to take all reasonable measures to ensure the safety of or otherwise interfere with an authorized officer in the performance of his duties, or to fail to comply with any lawful instruction or order, requirement or request of an authorized officer.

E. SEIZURE AND DETENTION OF A FISHING VESSEL

111. An authorized officer may where he has reasonable grounds to believe that an offence has been committed under this Law seize and detain any fishing vessel (together with its gear, stores and cargo), fish, fishery products or any other item which he has reason to believe has been used in the commission of the offence or in respect of which the offence has been committed.

112. The fishing vessel seized under subsection (1) and the crew thereof shall be taken forthwith to the nearest or most convenient port.

113. An authorized officer may where he has reasonable grounds to believe that an offence against this Law or a serious violation of an international conservation and management measure under an international agreement to which Georgia is a party, has been committed on the high seas, seize and detain any high seas fishing vessel and, where authorized by an international agreement to which Georgia is a party, any other fishing vessel (together with their gear, stores and cargo), fish,

fishery products or other article which he has reason to believe has been used in the commission of the offence or violation or in respect of which the offence or violation has been committed.

114. Any fishing vessel or article seized under subsection (3) shall be dealt with in accordance with applicable international law and, where international law does not provide, in accordance with this Law and other relevant laws of Georgia.

F. ENTERING PLACES OR PREMISES

115. An authorized officer may, where he has reasonable grounds to believe that an offence has been committed under this Law and in accordance with the laws of Georgia:

(a) enter, inspect and search any place or premises as well as require to be produced, examine and make copies of any permit or any other document required under this Law.

(b) seize any equipment, fish, fishery product or other items which he has reason to believe have been used in the commission of the offence or in respect of which the offence has been committed.

116. Any person shall immediately comply with every instruction or direction given by the authorized officer and facilitate his safe entry and inspection of the place or the premises and at all times take all measures to ensure the safety of the authorized officer in the performance of his duties.

117. It is prohibited to assault, obstruct, resist, delay, refuse entry, intimidate or fail to take all reasonable measures to ensure the safety of or otherwise interferes with an authorized officer in the performance of his duties, or fail to comply with any lawful instruction or order, requirement or request of an authorized officer.

G. SUSPENSION AND CESSATION

An authorized officer may where he has reasonable grounds to believe that an offence has been committed under this Law and in accordance with the laws of Georgia order the suspension or cessation of fishing, related activities or any other activity for which a permit is issued or required under this Law.

H. ARREST

An authorized officer may, and where it is impracticable to immediately bring any person before a competent court or jurisdiction as required by the laws of Georgia, arrest and detain any person whom he has reasonable grounds to believe has committed an offence against this Law.

I. REPORT

118. Following the completion of exercising any powers under this Law an authorized officer shall where he has reason to believe an offence has been committed under this Law prepare a written report.

119. A copy of the report shall be sent or handed to the offender.

J. HOT PURSUIT

Where an authorized officer has reasons to believe that a foreign fishing vessel has committed an offence under this Law in the Georgian waters, he has the power to pursue such foreign vessel to a place at sea beyond the Georgian waters and to the extent recognized by international law. A pursuit of a foreign fishing vessel is not taken to be terminated or substantially interrupted if only sight of the vessel is lost.

XIV. SANCTIONS

A. ADMINISTRATIVE AND CRIMINAL LAW

Any offence committed under this Act shall be punished in accordance with the administrative and criminal laws of Georgia.

XV. TRANSITIONAL AND FINAL PROVISIONS

A. REGULATIONS

120. Within six months of this Law coming into effect, the Ministry shall prepare and implement the following regulations and schedules:

(a) Local Fishing Regulations

(b) Inland Fishing Regulations

(c) Culture Based Fishing Regulations

(d) Sports Fishing Regulations

(e) Foreign Fishing Regulations

(f) Transhipment Regulations

(g) High Seas Fishing Regulations

(h) Aquaculture Regulations

(i) Fishing and Aquaculture for Research Purposes Regulations

(j) Regulations regarding the functioning of the Fishery Advisory Board

(k) Schedule regarding permit fees

121. For the purposes of implementing this Law, the Ministry shall have the power to prepare and implement any other regulations, codes of practice, guidelines and standards with respect to any matter dealt with under the Law.

B. CONTINUATION OF AGREEMENTS

Any agreement or arrangement entered into shall, except insofar it is inconsistent with this Law continue to have effect, unless such agreement or arrangement expires or terminates in accordance with the terms of such agreement or arrangement.

C. SAVING OF LICENSES AND PERMITS

122. Any fishing license or permit granted under the Law on Wildlife shall continue to be valid on such terms and conditions and for the period stipulated therein.

123. Any person of group of persons who undertakes culture based fishing activities at the time this Law enters into force shall apply within six months for a culture based fisheries permit in accordance with the provisions of this Law and any regulations made under this Law.

124. Any person who undertakes aquaculture at the time this Law enters into force shall apply within six months for an aquaculture permit in accordance with the provisions of this Law and any regulations made under this Law.

125. Any owner or charterer of a high seas fishing vessel who undertakes fishing or related activities on the high seas at the time this Law enters into force shall apply within six months for a high seas fishing vessel permit in accordance with the provisions of this Law and any regulations made under this Law.

D. AMENDMENTS AND REPEAL

[This part should be elaborated when the text of the Law is final]

E. INCONSISTENCY OF PROVISIONS

In the event of any inconsistency between the provisions of this Law and any other enactment, the provisions of this Law will prevail.

F. CITATION

This Law shall be cited as "the Law of Georgia on Fisheries and Aquaculture".

SUMMARY REPORT OF THE

WORKSHOP ON FISHERIES MANAGEMENT AND DEVELOPMENT, BATUMI, GEORGIA, 19 AUGUST 2004

WORKSHOP ON FISHERIES LEGISLATION AND MANAGEMENT, TBILISI, GEORGIA, 11 AND 18 FEBRUARY 2005

NATIONAL CONFERENCE ON FISHERIES MANAGEMENT AND DEVELOPMENT IN GEORGIA, TBILISI, GEORGIA, 15–16 JUNE 2005

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Introduction

1. In 2003 the Government of Georgia requested the Food and Agriculture Organization of the United Nations (FAO) to provide technical assistance for the management and development of fisheries and aquaculture in the country. In response, FAO, through its Technical Cooperation Programme (TCP), assisted Georgia with project TCP/GEO/2904(A). The project was entitled: "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation". The general objective of the project was to increase the effectiveness and efficiency of the Department of Fisheries (DoF) in leading and assisting the rehabilitation of the fishery sector in Georgia in a structured and responsible manner, with specific emphasis on the achievement of food security and alleviation of poverty, where the fishery sector could play a more prominent role.

2. Specifically, the project had to produce a national Master Plan for fisheries development, in consultation with the main stakeholders in the Georgian fishery sector, as part of the general fisheries policy framework; review the existing national fisheries legislation and draft appropriate amendments to the draft law on fisheries, in order to facilitate its finalization and approval; and develop data collection and evaluation systems, according to the specific conditions of the national fishery sector, to be used as tools for fisheries management and planning.

3. The formulation of the Master Plan and the drafting of the new Law of Georgia for Fisheries and Aquaculture meant that the current situation in the sector had to be investigated cautiously. To this end, a Review of the Current Status of Fisheries Resources and Utilization in Georgia was produced. In addition, to assist the Government of Georgia in its prioritization of fishery sector development interventions in the short term, an Action Plan for Fishery Sector Management and Development in Georgia was formulated, covering the period 2005–2008.

4. In order to enable a wide participation of fishery stakeholders in the process of elaboration of the Review of the Current Status of Fisheries (including aquaculture) Resources and Utilization in Georgia, the Master Plan for Fishery Sector Development, 2005–2020 and the draft of a new Law of Georgia for Fisheries and Aquaculture, three national-level meetings took place: a Workshop on Fisheries Management and Development, Batumi, 19 August 2004; a Workshop on Fisheries Legislation and Management, Tbilisi, 11 and 18 February 2005; and a final National Conference on Fisheries Management and Development in Georgia, Tbilisi, 15–16 June 2005. The agenda of these three meetings can be found in Annex 1, while the lists of participants are given in Annex 2.

5. The aim of this document is to present a summary report of the three meetings. It should be noted that the drafting process of the Law, Master Plan and Action Plan involved numerous stakeholder consultations and discussions. However, the three meetings were essential in the drafting process as they offered the possibility of exchanging opinions on a larger scale and added to the sectoral ownership of the policy and legal framework documents produced by the DoF of the Ministry of Agriculture.

Summary report of the Workshop on Fisheries Management and Development, Batumi, Georgia,19 August 2004

6. This workshop was the official start of the national fisheries master planning process in Georgia. Its main objectives were to discuss the state of fisheries and aquaculture and identify activities, gaps and measures to be taken for the formulation of a Master Plan for the long-term management and development of fisheries and aquaculture in the country. The event was also convened to provide an opportunity for key stakeholders in the fishery sector in Georgia to discuss the current state of the sector, the opportunities and constraints for fisheries development and the cooperation needed to realize sectoral development since, as was recognized by several participants, this was the first time that representatives from all stakeholders involved in fisheries and aquaculture had an opportunity to meet together after Georgia's independence.

7. The workshop was coordinated by Mr Zviad Tsertsvadze, the National Project Coordinator of TCP/GEO/2904 and was attended by 40 delegates from the fishery industry, fishery associations, government agencies, research institutes and non-governmental organizations (NGOs).

CURRENT STATE OF FISHERIES AND AQUACULTURE IN GEORGIA

8. In the presentation of this topic, it was pointed out that the Georgian fishery sector comprises three main subsectors: marine fisheries, inland fisheries and aquaculture. Before 1990, annual production of fish and other aquatic products was about 60–65 000 tonnes in the Atlantic and Indian Oceans, and 80–100 000 tonnes were caught in the Black Sea. Inland fisheries and aquaculture produced some 2–3 000 tonnes per year. At that time, the fish processing industry produced about 20 million cans of fish, up to 10 000 tonnes of salted and smoked fish and 5 000 tonnes of fishmeal. The annual fish consumption per caput in the country was then around 17 kg.

9. After independence, Georgian fishery production declined to less than 7 000 tonnes in 2001 and 2002, but rose again to 10 356 tonnes in 2003 and 10 381 tonnes in the first half of 2004. As regards aquaculture in the country, at present there are about 25 private trout farms that each produce between 10 and 30 tonnes. Fish processing plants located in Tbilisi, Kutaisi, Batumi, Sukhumi and Gagra, are currently not operational. A new fishmeal processing plant has been constructed near Poti, which produced 200 tonnes of fishmeal in the 2004 spring season. A second new fishmeal plant is under construction near Batumi. This appears to be a reactivation of the former Georgian fish processing capacity. Demand for low-priced products is high in the country because of the restricted socio-economic situation, but demand for higher valued products is expected to increase once economic recovery takes place. Officially, 4 234 tonnes of fish were imported in 2003, when the export of fishery products reached 2 936 tonnes. The average per caput consumption of fish currently does not exceed 4 kg.

10. Commercial banks provide loans with an average yearly interest rate of 18–24 percent. There are no institutions that provide flexible credits to meet the needs of small- and

medium-sized fisheries and aquaculture producers. This prevents many local entrepreneurs from investing in fisheries and aquaculture production.

11. Several government agencies have administrative functions that relate to the fishery sector in Georgia. The Ministry of Agriculture is engaged in policy-making and sector development, setting quality regulations for fishery products and licensing fish processing activities. The Ministry of Environment Protection and Natural Resources is engaged in the allocation of marine fishing quotas and licensing fishing and aquaculture activities. The Ministry of Economic Development has some responsibilities for fish production in inland waters. The Ministry of the Interior is responsible for marine fisheries monitoring, control and surveillance and the state Department of Statistics is responsible for fisheries data collection, processing and dissemination.

12. Currently, Georgia does not have a fisheries law. The former Soviet fisheries legislation has been abolished and no new legislation enacted. A series of laws on the protection of the environment and several natural resources provide a framework for the protection of fishery resources, but no law has been enacted to support and encourage the sustainable economic use of living aquatic resources.

13. The country has potential for the development of both capture fisheries and aquaculture but it is not being properly exploited. The fishery resources of the Georgian coastal zone in the Black Sea allow for an annual production of not less than 80–100 000 tonnes. The annual production of fish in inland waters could reach about 3 000 tonnes. Aquaculture production is limited only by market demand and the availability of funds to invest and operate in this sector.

14. During the discussion that followed the presentation, uncertainty about marine fishery production figures was evident. Some participants felt that if the actual marine fishery production of Georgian, Ukrainian and Turkish fishers in Georgian waters were to be taken into account, the total catch would be several times higher than the figure given in the presentation. The participants agreed that fishery output in the Georgian zone in the Black Sea could not be compared with the output of the Soviet era.

15. The dispersion of the administrative functions of the fishery sector among several government agencies was considered to be a main constraint to the rehabilitation of the fishery industry, as well as to fisheries management and development in Georgia. The urgent need for a fisheries law, which defines responsibilities for fishery administration and the establishment of a leading administrative unit was confirmed. The need to restore the fish processing plants or build new ones, attracting investors and developing a credit system, was also expressed. The current impossibility of financing fisheries development with bank loans was mentioned as a major constraint to development of the sector. A final point in the discussion was related to fishery research. The participants agreed that Georgian scientific institutions are able to carry out the research and training required for fisheries management and development but their capacity could not be fully exploited because of the low levels of funding allocated to fishery research and training by the Government.

STRENGTHENING THE INSTITUTIONAL CAPACITY OF THE DEPARTMENT OF FISHERIES OF THE MINISTRY OF AGRICULTURE

16. The Director of the DoF of the Ministry of Agriculture presented this agenda item, arguing that in order to rehabilitate the fishery industry and put an end to illegal fishing and other mismanagement activities in Georgia, the DoF should be assigned the following responsibilities, i.e. to:
    - elaborate and implement fishery and aquaculture regulations;
    - protect fishery resources;
    - augment fishery reserves through ranching and restocking of inland waterbodies;
    - provide services of acclimatization, genetic selection and fish health management;
    - elaborate technical standards for fishery products;
    - provide quality control for fish and fishery products;
    - ensure implementation of fishery regulations through fishery monitoring, control and surveillance;
    - attract investment; and
    - search for "new" markets, including export markets.

17. The need to transfer technical and financial resources to the DoF for the necessary fishery and aquaculture administration and services – some of which are at present allocated to other ministries – was highlighted.

18. The need to transfer the function of managing the Expert Council on Fisheries to the DoF was also expressed, recalling that the Council has a mandate to determine fisheries zones in marine and inland waters, establish annual fishing quotas in marine and inland waters, allocate quotas to the holders of fishery licences, and determine the amount and source of funds for research on development, selection, acclimatization, reproduction and fish diseases.

19. During the discussion that followed the presentation, some participants expressed the view that no changes in the functions of different government agencies with respect to fishery administration activities would be possible unless a new fisheries law could be agreed upon.

MASTER PLAN FOR THE DEVELOPMENT OF FISHERIES AND AQUACULTURE IN GEORGIA

20. Introducing this agenda item, the Secretariat pointed out that the FAO Code of Conduct for Responsible Fisheries notes that a fisheries management and development plan is an arrangement between the fishery authority and interested parties, which establishes objectives and provides broad directives as to how resources are to be utilized. The plan should also set priorities and serve as a reference and information source for the fishery administration and fishery sector stakeholders. The current planning system established in Georgia is a programme for economic development, with selected development indicators at the sector level. At present, fishery indicators are not being included in the Economic Development and Poverty Reduction Programme and no fishery development projects have been implemented. A strategy to assist the Ministry of Agriculture to carry out structural changes to support the development of agrifood production has been drafted, but the fishery sector is not considered in this document.

21. It was stressed that the main difficulty faced, when formulating and implementing fisheries development programmes and projects in Georgia, was the weakness of fishery institutions. Moreover, the organization of fisheries under several governmental agencies is a major obstacle to managing the sector. Concentration of the main fishery administrative functions in a single unit, and the strengthening of that unit are prerequisites for the proper formulation and implementation of fisheries development plans.

22. It was emphasized that responsible fisheries management and development requires the existence of a national fisheries entity (a fisheries management body), to represent the interests of the state in the exploitation and utilization of fishery resources and aquaculture. The functions of a national fishery entity should include, as a minimum, the following, i.e. to:
    - coordinate, collect, analyse and diffuse data and information relating to fishery activities;
    - prepare fisheries development programmes and formulate and support the implementation of fisheries development projects;
    - prepare and implement fishery and aquaculture regulations;
    - issue licences and permits for fishery and aquaculture activities;
    - ensure implementation of fishery regulations through fishery monitoring, control and surveillance;
    - liaise, discuss and make joint decisions with all groups interested in fisheries; and
    - determine research needs for fisheries and aquaculture management and development.

23. Responsible fisheries management and development also require the participation of institutions representing the interests of stakeholders in the fishery sector, such as fishers' associations, trade union organizations, fishery companies and other organizations with a stake in fisheries. These institutions should defend their interests and be able to cooperate with the fishery administration, providing data and information, participating in policy-making discussions and supporting fisheries management and resource conservation. Research institutions with a capacity to work on fishery issues should be able to carry out fishery research, according to the needs of the sector.

24. It was pointed out that, in most countries, a fisheries development plan is a document that identifies opportunities, establishes fishery objectives and describes pertinent public and private steps to be taken in order to achieve these objectives. The plan usually details the way forward for capture fisheries, aquaculture, processing, marketing and trade. In the formulation of the plan, participation of all concerned stakeholders is essential for generating ownership of the plan and for willingness to implement it.

25. In determining the main fishery planning options for Georgia, it is advisable to consider the three fishery subsectors: marine capture fisheries, inland capture fisheries and aquaculture. Marine capture fisheries appear to have good possibilities for exploiting to a larger extent the potential of small pelagics in the Black Sea and increasing their fishery output. In inland capture fisheries, there are opportunities for improving fishery output in some rivers, lakes and reservoirs. There are also possibilities for aquaculture to increase fish production, especially in trout rearing on small farms. With respect to fish processing, studies should be carried out to rehabilitate the industry and create new capacity. In the

area of fish marketing and trade there are opportunities for augmenting domestic fish consumption, ensuring the quality of fishery products and developing trade.

26. During the debate that followed the presentation of this agenda item, the workshop agreed that concentrating the main fishery administrative functions in a single fisheries management body and strengthening this body were prerequisites for the rehabilitation and development of the fishery sector in Georgia. It was also highlighted that concentrating these main fishery administrative functions in a single unit and defining how this unit would cooperate with other institutions with interests in fisheries would not be possible in the short term, because of the dispersion of fishery administrative functions among several state agencies and the gap in fisheries legislation.

27. Through a matrix prepared to assess the perception of the stakeholders on the involvement of their respective institutions in fisheries management and development activities, several participants claimed that their agencies were active in most of these activities when, in fact, only one or two of them were involved in fisheries management and none were actually supporting fisheries development activities.

28. The workshop agreed with the proposed planning process and the content of the Master Plan for the rehabilitation and development of the fishery sector in Georgia. It was suggested by some participants that fisheries management activities should be included in the Master Plan, for instance, to combat illegal fishing in inland waters; increase effective control of the fishing operations of foreign vessels in Georgian waters; enact special regulations to establish realistic fees to be paid by foreign fishing vessels, which is a major concern for fishers; and add specific regulations to deal with the continued issuing of the Georgian flag to foreign vessels. However, other participants preferred to deal with these issues through the fisheries law.

29. The workshop recognized the need to finalize the fisheries law as soon as possible, in order to facilitate the introduction of the changes necessary in the institutional structure of the fishery administration and the implementation of fisheries management and development plans.

DATA COLLECTION, PROCESSING AND DISSEMINATION FOR FISHERIES MANAGEMENT AND DEVELOPMENT

30. The Secretariat introduced this agenda item by explaining that the TCP/GEO/2904(A) project had among its objectives the development of a system for data collection, processing and dissemination in Georgia. The fishery statistics system to be established is conceived to be in line with FAO standards. It was explained also that the new fishery statistics system will be established in close collaboration with the state Department of Statistics and the Georgian Institute for Scientific and Technical Information.

31. The workshop was informed that the project had collected fishery data and information on the marine fishery fleet, fish landings of main commercial species and employment in capture fisheries on the Georgian coast of the Black Sea. It was also mentioned that in Georgia there are two main state organizations responsible for the collection, processing and dissemination of statistical data and information: the Department of Statistics of the Ministry of Economic Development and the Georgian Institute for Scientific and Technical Information. The former is responsible for providing statistics to all branches of

agriculture and industry, including the fishery sector. Nevertheless, the institution is currently unable to provide the data and information required for fisheries and aquaculture development planning.

32. Some participants proposed that the fisheries management body to be established in Georgia should include, among its priority functions, a mandate to coordinate, collect, analyse and disseminate data and information relating to fishery activities, while the Department of Statistics of the Ministry of Economic Development should maintain its function of collecting and processing information at the national level. It was also recognized that any fishery statistics system would not be able to gather, process and provide the data and information necessary for fisheries management and development planning, unless it had suitable equipment, staff, training and funds.

Summary report of the Workshop on Fisheries Legislation and Management, Tbilisi, Georgia, 11 and 18 February 2005

33. The objective of this workshop was to discuss with key stakeholders in the Georgian fishery sector a second draft of the Master Plan for Fishery Sector Development in Georgia, 2005–2020 and a draft Law of Georgia for Fisheries and Aquaculture. The Master Plan was prepared according to the recommendations and guidelines of the workshop held in Batumi in August 2004. The draft Law of Georgia for Fisheries and Aquaculture was prepared after both a detailed study on Georgian legislation relevant to the fishery sector and extensive consultations with representatives from the national fishery sector. The workshop was chaired by the First Deputy Minister of Agriculture, Mr Nugzar Sardjeveladze. Thirty-one representatives from the fishery industry, fishery associations, government agencies, ministries, research institutions, projects, international organizations and NGOs attended the workshop.

MASTER PLAN FOR FISHERY SECTOR DEVELOPMENT IN GEORGIA

34. Introducing this agenda item, the Secretariat stressed that the draft Master Plan for Fishery Sector Development in Georgia, 2005–2020, presents an outline for the long-term development of the fishery sector. It was mentioned that the formulation process was an ongoing activity and that the first opportunity for stakeholders to express their opinions on the Master Plan formulation process had been given during the Batumi workshop. Following the workshop, a first draft Master Plan had been prepared and sent for comments to a selected group of key stakeholders.

35. It was pointed out that the Government of Georgia had not considered the fishery sector a priority sector for development until recently, when it decided that a Master Plan for fishery sector development should be formulated.

36. One of the overall objectives of the Master Plan is to make use of aquatic living resources in a sustainable manner to ensure that present and future generations can enjoy these resources as a source of food, employment, income and recreation. A main issue in this area is that at present the level of exploitation of Georgian aquatic living resources is low because the capacity of the fishing fleet is minimal. Demand for fishery products, as well as the level of exploitation of the resources is, however, expected to increase.

37. It was stressed that the use of aquatic living resources should be based on scientific evidence, according to the provisions of the Law of Georgia for Fisheries and Aquaculture and those of the FAO Code of Conduct for Responsible Fisheries. Community-based management of fishery resources should be promoted and a coordinated system of monitoring, control and surveillance established.

38. The activities of administrative, research and education institutions in the fishery sector have been fairly limited in recent years and in some cases have been terminated as a result of budgetary constraints. Responsible fisheries development requires the support of an administrative institution, which should be able to carry out all functions relevant to fisheries management and development. However, this will not preclude the involvement,

through coordination and cooperation, of other agencies with legal mandates and interests in fishery activities.

39. It was stressed that the role of fisheries research institutions is extremely relevant in Georgia. The Marine Ecology and Fisheries Research Institute (MEFRI) and the Institute of Zoology receive very limited support and their capacity to carry out research in support of fisheries management and development has shown a decreasing trend for some time. Fisheries research institutions should have a joint and coordinated research programme, to include all aspects of fisheries. A formal fisheries educational programme should also be established to provide an adequate and modern education for those employed in the fishery sector. The need for an efficient fishery statistics system that is able to provide the data and information necessary to take decisions on fisheries management and development was emphasized. Fishers' and aquaculturists' associations should be strengthened and established and act as counterparts of a fisheries management body, the latter to be established urgently.

40. The draft Master Plan recommends that Georgia increase its participation in international cooperation on fishery issues, through membership in relevant international and regional fishery organizations, such as the General Fisheries Commission for the Mediterranean (GFCM).

41. The draft Master Plan set as an overall objective for marine fisheries in Georgia the development of a marine fisheries fleet which is able to exploit coastal living aquatic resources in a responsible manner and land fish in fishing ports and landing places with adequate facilities. The main specific objectives stipulated in the draft Master Plan for this subsector are the development of a marine fisheries fleet that is able to catch a minimum of 50 000 tonnes of fish in the Georgian exclusive economic zone (EEZ) and the rehabilitation of fishing ports and landing places.

42. The draft Master Plan also contains an overall objective for inland capture fisheries, i.e. to use the inland aquatic living resource potential in support of rural poverty alleviation, economic growth and development. It was explained that two kinds of inland fisheries need to be differentiated in Georgia – the harvest of wild fish in inland waters (inland capture fishery) and the harvest of fish in waterbodies that have been stocked with fingerlings reared in aquaculture hatcheries (culture-based inland fishery). The potential of fishery resources in both fisheries is great. The living aquatic resources in inland waters also have potential for the development of recreational fishing.

43. It was explained that the draft Master Plan foresees as specific objectives for inland capture fisheries and culture-based inland fisheries a production of at least 5 000 tonnes annually. Private entrepreneurs should be enabled to participate in the management of waterbodies and a national-level framework for recreational fisheries in inland waters should be established.

44. The main objective stated in the draft Master Plan for the aquaculture sector is to develop aquaculture that produces quality products. Aquaculture has the possibility of increasing the production of fish but there is a lack in the supply of fish feed to the domestic market, the production of fingerlings is low and their quality is poor. Some specific objectives set in the draft Master Plan for the aquaculture subsector are that it should be able to produce

at least 2 000 tonnes annually and that Georgia become self-sufficient in fingerlings and fish feed production.

45. The objectives established in the draft Master Plan with respect to the ongoing privatization process and enterprise development are, first, to complete the privatization process of the fishery sector. Furthermore, small- and medium-sized enterprises in the sector should be given access to training and advice on business and investment planning. Fishery sector enterprises should also pay fewer import duties for essential equipment, fish feed, drugs and fingerlings as long as the national supply cannot satisfy demand.

46. The suggested overall objective for the post-harvest fishery sector is to establish a modern fishery products processing sector that produces good quality, healthy and safe fishery products as demanded by domestic and export markets. Further specific objectives are to set up an effective cooperation mechanism in the fishery products marketing chain and to establish a wholesale market in Tbilisi as well as fish wholesale facilities at the main fishing ports. Trade in fish with Turkey, the Caucasus countries, Russia, Ukraine and the rest of Europe should also be improved.

47. The participants agreed with the suggested overall objectives of the Master Plan and had only a few minor remarks concerning the wording in the Georgian language of some specific objectives. The discussion focused mainly on the need to develop the fishery sector. In this regard, the slow rehabilitation and development of the fish processing sector was mentioned as a constraining factor affecting the whole development of the fishery sector.

48. The identification of funding sources for investments in the fishery sector was generally considered a main issue to be addressed by the fishery administration. Although funds are assigned to the DoF to support fishery research, support the establishment of fish feed production in the country and increase the capacity to produce fingerlings, the problem of finding entrepreneurs interested in investing in the fishery sector still remains.

49. The institutional issue was again commented upon by several participants. In this regard, FAO's proposal to concentrate the main functions of fisheries management and development within one national fisheries management body was widely supported. A decision on this issue should be taken urgently by the Government of Georgia.

LEGAL REFORM

50. In the introduction of this agenda item, it was pointed out by the Secretariat that the presentation would put emphasis on the legal issues related to fisheries management. With regard to the issue of the institutional framework it was stated that a principal decision needs to be taken by the Government of Georgia as to which ministry is responsible for the use and control of fishery resources. It was also pointed out that the Law of Georgia for Fisheries and Aquaculture should be seen as a framework law, providing for the principles and basic requirements of fisheries management. Details concerning permit application procedures, permit formats to be used and specific permit conditions are confined to regulations to be made under the law in order to respond to different times and needs.

51. The management tools and mechanisms that were discussed include the preparation of a fisheries management plan. This plan should identify, *inter alia*, each fishery and its particular problems, the actors involved and the objectives and measures for development. Basic management measures should be addressed, such as the establishment of open and closed seasons, fish requirements, fishing methods, gear, landing, sale and transport. Attention was drawn to the various general prohibitions provided for in the draft law. In addition, it was stressed that the draft law delegates the responsibility of negotiating fisheries management agreements (with other states or regional organizations in the Black Sea region) and access agreements to the fisheries management body.

52. The importance of stakeholder participation in the drafting process and implementation of the law was mentioned, stating that it would lead to more legitimacy and ultimately compliance with the law. The law provides for increased participation in several areas. Delegation could be particularly relevant for the rehabilitation of the inland fishery sector, where the fisheries management body may not be able to provide a cost-effective service. The various permit regimes were discussed, stressing that a permit should be connected to the vessel and issued in the name of the owner or the person who charters the vessel. The draft law also establishes a precondition before obtaining a licence, i.e. registration of the vessel in the Fishing Vessel Register for purposes of operation, seaworthiness and safety. With regards to aquaculture, it was indicated that this sector is typically regulated by a variety of other laws, including environmental legislation and veterinary laws and regulations.

53. It was pointed out that the draft law provides for the collection of data and statistics and the establishment of an observer programme to monitor fishing operations. The importance of enforcement was also stressed. Georgia is at present a country of limited financial means and facilities, and should therefore make use of existing enforcement authorities, i.e. the Coastguard and the Patrol Police. In addition, the draft law considers the appointment of several fisheries inspectors specifically for enforcement purposes.

54. Responsible fisheries management requires that the institutional framework for fisheries management be defined in the law and should empower this structure with corresponding authority. Hence, in order to implement successfully fisheries management decisions, a clear legal statement is essential as to who is entitled to administer and control the use of fishery resources. This implies that the law should spell out precisely the functions and powers of the government and other institutions involved in fisheries management, including the delimitation of their jurisdiction. The legal regime should provide the basis for the establishment of a fisheries management body, which may take the form of a ministry, a department within a ministry, or an independent agency.

55. The establishment of a single well-resourced and independent management authority for fisheries conservation, management and development was considered. Although this model would strengthen the development of the sector, it was not considered a viable option at this stage, mainly because under current Georgian legislation this authority cannot be accompanied by a so-called "fisheries fund" that would be supplied with fishing licence/permit fees. A more likely alternative would be to divide the responsibilities between the Ministry of Environment Protection and Natural Resources (conservation, protection and assessment of total allowable catch) and the Ministry of Agriculture (management, development and allocation of total allowable catch). This model would balance the various interests involved and lead to optimum utilization and economic

efficiency. It was stressed that the decision on the institutional structure is a political issue and should ultimately be decided upon by the Government of Georgia.

56. Next, an overview was given of the various permit regimes that the draft Law of Georgia for Fisheries and Aquaculture establishes, including fishing by vessels owned by Georgian nationals or companies, foreign fishing and fishing on the high seas by Georgian flagged vessels. Foreign fishing should require an access agreement between Georgia and the state of the foreign fishing vessel. In addition, the law establishes permit regimes for inland fishing, culture-based fisheries and recreational fishing. It was suggested that subsistence fishing remain free. Finally, the draft law establishes permit regimes for aquaculture, which is currently an unregulated area, and for fish processing and trade.

57. Lastly, the Secretariat pointed out that the law should establish an effective mechanism for monitoring, control and surveillance. The draft law provides for the collection of data and statistics and establishes an observer programme to monitor fishing operations.

58. During the discussion that followed the presentation on legal reform, the Deputy Minister of the Ministry of Environment Protection and Natural Resources stressed several issues that were of concern to his ministry. Concerning the proposal in the draft law that the responsibilities for both licensing and development of the fishery sector be given to the Ministry of Agriculture, he argued that the division of management responsibilities, as the situation is in Georgia today, was a basic principle, and pointed to Estonia as a country that has this kind of division of authorities. He stressed that while the fish is in the sea, it is a natural resource, while it is considered food when it is landed, and that this should be reflected in the legislation. He also pointed out that the proposed law overlapped with older laws regarding definitions, and that the concept of a "one-stop shop" should be developed.

59. The Chairman of the Parliamentary Committee on Environment Protection and Natural Resources stated that he was not pleased to be informed so late about this project. He stressed that he would not support the power for issuing fishing licences to be transmitted to the Ministry of Agriculture, and that his Committee would be left powerless if this law were to be adopted.

60. The representative of the Maritime Transport Administration pointed out that the proposed Law of Georgia for Fisheries and Aquaculture needs harmonization in order to adjust it to terms that are already defined in other Georgian laws. He also stressed that there are some contradictions with Georgian labour legislation and legislation on public authorities.

61. It was further pointed out that, according to current Georgian legislation, negotiation and conclusion of international access agreements were the responsibility of the Government of Georgia as a whole, and not of a ministry. The draft Law of Georgia for Fisheries and Aquaculture should therefore be changed on this point.

62. The Director of the DoF said that he had come to the same conclusion as the FAO lawyer regarding the Law of Georgia for Fisheries and Aquaculture and that the proposed draft would receive his full support in the subsequent process towards governmental approval. The Deputy Minister of Agriculture ended the discussion by saying that the Ministry of Agriculture agrees that one body should manage the fishery sector.

INTERNATIONAL LAW GOVERNING FISHERIES MANAGEMENT

63. The Secretariat presented a brief overview of some important international agreements and instruments governing fisheries management that Georgia should implement, as well as an overview of the national legislative implications of these international instruments.

64. It was stressed that international law and agreements regulate the relationship among states, and generally only bind states, not individuals. Therefore, national legislation is needed to bind individuals and enable enforcement. Furthermore, it was emphasized that by becoming party to a binding international agreement, Georgia undertakes a legal obligation to abide by the provisions set forth in the agreement, and thus national implementation is necessary to fulfil these obligations.

65. The Secretariat continued with some comments on the important provisions in the UN Convention on the Law of the Sea (UNCLOS), to which Georgia has been a party since 1996. The provisions include the duty of states to take measures for the conservation and management of living resources in the EEZ and on the high seas, as well as their duty to cooperate in the conservation of straddling stocks and living resources of the high seas. These UNCLOS provisions are implemented by the agreement to promote compliance with international conservation and management measures by fishing vessels on the high seas (Compliance Agreement). Georgia has been party to this agreement since 1994. It was stressed that the agreement has several provisions related to flag state responsibility, the keeping of fishing vessel records, international cooperation and exchange of information.

66. Subsequently, an introduction to the FAO Code of Conduct for Responsible Fisheries was given, stressing that, even though this instrument is of a voluntary nature, it is widely accepted. Serving as an instrument of reference for improving legal and institutional frameworks for responsible fisheries conservation, management and development, many recent fishery laws around the world are based on the Code. It was pointed out that the Code sets forth principles and standards for the conservation, management and development of all fisheries, including fish processing, trade in fish and fishery products, fishing operations, aquaculture and fishery research.

67. The final part of the presentation was dedicated to an overview of some important provisions of the draft convention for fisheries and conservation of living resources of the Black Sea (draft Black Sea Fisheries Convention). It was stressed that the Convention, when adopted by states, would have a great influence on the conservation and management of fish stocks and living resources in the Black Sea. It would provide for the establishment of the Black Sea Fisheries Commission.

68. During the discussion that followed, several issues were raised. There were questions relating to the draft Black Sea Fisheries Convention regarding foreign fishing in the Georgian EEZ, the allocation of quotas and the representation of Georgia in the Black Sea Fisheries Commission. The Director of the DoF said that he thought this representation should be provided for in the Law of Georgia for Fisheries and Aquaculture.

69. Some participants expressed concern regarding unregulated fishing by Turkish vessels in the Georgian EEZ, as well as Ukrainian boats fishing in Georgian territorial waters. It was stressed that the only way to combat illegal, unreported and unregulated (IUU) fishing in the Black Sea is through cooperation under the Black Sea Fisheries Convention.

70. Concern was also expressed as to who should monitor fishing in the Black Sea once the Convention is adopted, and whether FAO could provide assistance. In this regard, it was said that FAO could provide technical assistance but problems with the management of fisheries in the Black Sea could only be solved through cooperation among the countries concerned. In order to address these problems, it was emphasized that Georgia urgently needs the Law of Georgia for Fisheries and Aquaculture and a proper fishery administration.

Summary report of the National Conference on Fisheries Management and Development in Georgia, Tbilisi, Georgia,15–16 June 2005

71. The objectives of the National Conference were to provide a platform for final discussions on the Master Plan for Fishery Sector Development in Georgia, 2005–2020 and the Action Plan for Fishery Sector Management and Development in Georgia, 2005–2008, and to inform the Georgian governmental authorities involved in fisheries on the outputs of project TCP/GEO/2904(A) "Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation". Consequently, the Conference was held in two sessions, one to address technical issues on 15 June and the other to discuss policy implications on 16 June 2005. The Conference was attended by 53 fishery sector stakeholders, including fishers, fish farmers, scientists, policy- and decision-makers, government staff, NGOs, international donors and the media.

TECHNICAL SESSION, 15 JUNE 2005

72. During this session, the final draft Master Plan and the draft Action Plan were presented and discussed by representatives of fishery stakeholders. The vision, principles, monitoring, overall and specific objectives and time frame for the implementation of the Master Plan were considered and several recommendations were made and incorporated in the final version of the document. The draft Action Plan provoked vivid interest among the participants, since it had been drafted after the recommendations of the February 2005 workshop, and was the first time it had been presented for sector-wide discussion.

73. The Action Plan has been developed following the Master Plan structure. It was conceived as an essential element for initiating short-term interventions needed for fishery sector rehabilitation. It contains the priority activities to be undertaken by the Government, the DoF of the Ministry of Agriculture, and the fisheries research institutions and donor agencies active in Georgia, in collaboration with fishery sector stakeholders, for the development of the fishery sector up to the end of 2008.

74. The Action Plan provides for short-term studies, project formulation and execution and other activities for sectoral development. It includes capacity building activities, institutional strengthening, training and education, and priority development activities in the marine and inland capture fisheries, aquaculture and the post-harvest sector. The Plan also provides guidelines for the establishment of an advisory board with clear terms of reference; this will consist of representatives of fishery stakeholders and relevant authorities involved in fishery sector activities and will monitor progress made towards implementing the current and future Action Plans and the Master Plan.

75. The Action Plan identifies four priorities that outstrip all others for the Government of Georgia with regard to the fishery sector. These priority issues refer to (i) an agreement on and approval of the draft Law of Georgia for Fisheries and Aquaculture; (ii) an agreement on and approval of the Master Plan for Fishery Sector Development in Georgia, 2005–2020, including the Action Plan; (iii) a decision on the establishment of a fisheries management body and the ministry under which it is to be placed; and (iv) public recognition of the fishery sector as a priority sector for national economic growth,

achievement of food security and alleviation of poverty. Unless the Government takes urgent decisions on these four priority issues it will be impossible to achieve sustainable management and development of the fishery sector in Georgia.

76. The immediate objectives defined by the Action Plan for the DoF focus on concrete and pertinent outputs that contribute directly to the achievement of the specific objectives of the Master Plan. The intended outputs are formulated as projects, with a methodology of formulation that includes, *inter alia*, the title of the project, a definition of its main activities, the agency responsible for its implementation, a timetable for its execution, an estimation of budget and possible funding sources.

77. The Conference identified the following 16 priority projects.[6]
- Establishment of the Fisheries Management Body (FMB)
- Assessment of fishery resources
- Establishment of a system for monitoring, control and surveillance of fisheries
- Improvement of the fishery statistics system
- Geographic information system (GIS) mapping of agriculture, forestry and fisheries
- Capacity building in fisheries and aquaculture
- Organizational strengthening of associations in the fishery sector
- Increased regional and international cooperation in fisheries
- Feasibility assessment of the fishery sector
- Fingerlings and feed research in aquaculture
- Poverty alleviation through aquaculture and inland fisheries development
- Aquaculture development through demonstration
- Increased access of the fishery sector to financial services
- Fisheries marketing study
- Wholesale/retail market development of fishery products

78. An estimation of the budget required for the Action Plan and possible funding sources were included in the formulation of the projects in order to ascertain the budget required and its provenance. This will enable the DoF to make more comprehensive requests to the central government for funding of its priority activities and also allow an active search for funds from international donors interested in helping the Government of Georgia to develop its fishery sector. The total budget required for the implementation of these projects is estimated at approximately 7 million lari[7] for the period 2005–2008. Once the Master Plan has been approved, the budget necessary for the projects proposed will be calculated in more detail.

POLICY SESSION, 16 JUNE 2005

79. This session was opened by the Minister of Agriculture, Dr Mikhail Svimonishvili, who welcomed participants and thanked FAO for its support to the fishery sector in Georgia. He referred to the importance of fisheries and aquaculture for rural employment, economic development and poverty alleviation in the country and stated that the Conference would review the final draft Master Plan for Fishery Sector Development in Georgia, 2005–2020,

[6] The order in which the priority projects are presented refers to the appearance of the overall and specific objectives in the Master Plan to which the priority projects relate.

[7] The official exchange rate at the time of drafting this document was: 1 Georgian lari = US$0.5.

the draft Action Plan for Fishery Sector Management and Development in Georgia, 2005–2008 and the draft Law of Georgia for Fisheries and Aquaculture. He emphasized that all these documents had been prepared by the DoF with assistance from relevant sectoral stakeholders and FAO.

80. During the session, a summary of the final draft Master Plan was presented by the Secretariat, pointing out the relevant overall objective, the main issues and specific objectives proposed for fisheries management and development in the areas of (i) responsible use of aquatic living resources; (ii) institutional strengthening and capacity building, including the establishment of an FMB; (iii) responsible development of marine capture fisheries; (iv) responsible development of inland capture fisheries and aquaculture; (v) privatization and enterprise development in the fishery sector; and (vi) post-harvest activities, fisheries markets and trade.

81. The Secretariat then presented an overview of the state of world fisheries and aquaculture in 2004 and compared Georgian fisheries with those of some neighbouring countries. A summary of the Action Plan was subsequently presented. The information provided included an explanation of the linkage of the Action Plan with the Master Plan; the Action Plan time horizon; the methodology used in its formulation; provisions for monitoring and review; priority decisions required from the Government as prerequisites for the implementation of the Action Plan; the institutional framework required for the fishery sector; the title and relevant details of the 16 priority projects agreed by the technical session of the Conference; an estimation of the budget required; and possible funding sources. The important role that international donors can play in the implementation of some of these projects was also stressed.

82. The Director of the DoF, Dr David Iakobidze, gave his views on the draft Law of Georgia for Fisheries and Aquaculture by stating that the fishery sector is a complex economic sector, which should be regulated by specific legislation, and that the draft Law of Georgia for Fisheries and Aquaculture developed by the DoF with input from fishery stakeholders in Georgia and FAO, encompasses all the main issues within this complex sector. The draft Law of Georgia for Fisheries and Aquaculture neither overlaps nor contradicts present Georgian legislation. He specifically pointed out that the draft law contains 24 relevant terms and definitions that are new in Georgian legislation and that, when implemented, will enrich the Georgian economic and juridical lexicon.

83. The Director of the DoF expressed his opinion regarding the FMB proposed by the draft law and also by the Master Plan. He pointed out that the FMB would be a legal entity encompassing all aspects of the management and utilization of aquatic living resources in Georgia. It would provide for cooperation with relevant institutions that have interests in the fishery sector in the country, while the present DoF of the Ministry of Agriculture has the power to deal with only a limited number of activities on fisheries management and development.

84. During the discussion that followed the presentation of the draft Master Plan, the Action Plan and the draft Law of Georgia for Fisheries and Aquaculture, the Minister expressed his agreement with the documents and recommended that the DoF steer the documents through the governmental approval process to enable implementation of the Master Plan, Action Plan and Law as soon as possible. He also recognized the need for an FMB to address the present stagnant situation of the fishery sector.

85. The need to regulate the activities of fishing vessels operating on the high seas under the Georgian flag was stressed by some participants. In this regard, it was pointed out that the DoF has never been consulted as to which foreign vessels should be given the right to fly the Georgian flag, even though this is an issue of direct concern for the Department. Another discussion item was the improvement of production capacity for aquaculture inputs (feed and fingerlings) in Georgia; this was seen as a major constraint for the development of aquaculture. The Minister informed the Conference that an international animal feed company was planning to establish a plant for the production of ingredients for animal feed production in Georgia, which could potentially contribute to the enhancement in production of fish feed in the country.

86. The representative of the Georgian Coastguard, General Davit Gulua, pointed out that his institution was working on the preparation of a new law aimed at regulating, *inter alia*, fishery monitoring, control and surveillance in Georgian jurisdictional waters. He suggested that both drafts – that of the Coastguard and the Law of Georgia for Fisheries and Aquaculture – should be analysed jointly, in order to avoid overlapping and contradictions. The General also said that although the Coastguard was involved in a process of strengthening and modernization, it was ready to increase its involvement in fishery monitoring, control and surveillance activities in Georgian marine waters. He added that cooperation with a new fisheries management body to be established by the new Law of Georgia for Fisheries and Aquaculture would be welcome.

ANNEX 1

AGENDA OF THE WORKSHOP ON FISHERIES MANAGEMENT AND DEVELOPMENT, BATUMI, GEORGIA, 19 AUGUST 2004

1. Opening ceremony.
2. Organization of the meeting.
3. Information on project TCP/GEO/2904(A) – Strengthening the Capacity of the Department of Fisheries to Support Fisheries Sector Rehabilitation.
4. Current state of fisheries and aquaculture in Georgia.
5. Strengthening the institutional capacity of the Department of Fisheries of the Ministry of Agriculture.
6. Master Plan for the development of fisheries and aquaculture in Georgia.
7. Data collection, processing and dissemination for fisheries management and development.
8. Closure of the workshop.

AGENDA OF THE WORKSHOP ON FISHERIES LEGISLATION AND MANAGEMENT, TBILISI, GEORGIA, 11 AND 18 FEBRUARY 2005

11 February 2005

1. Opening ceremony.
2. Master Plan for Fishery Sector Development in Georgia.
3. Legislative reform for the fishery sector in Georgia.
4. Discussion.
5. Closure of the session.

18 February 2005

1. Opening ceremony.
2. International law governing fisheries management.
3. Legislative reform for the fishery sector in Georgia.
4. Master Plan for Fishery Sector Development in Georgia.
5. Discussion.
6. Closure of the workshop.

AGENDA OF THE NATIONAL CONFERENCE ON FISHERIES MANAGEMENT AND DEVELOPMENT, TBILISI, GEORGIA, 15–16 JUNE 2005

Technical session – 15 June 2005

1. Opening ceremony and arrangements for the session.
2. Presentation and detailed discussion of the Master Plan for Fishery Sector Development in Georgia, 2005–2020.
3. Presentation and detailed discussion of the Action Plan for Fishery Sector Management and Development in Georgia, 2005–2008.
4. Follow-up of the Action Plan and the approval process within the Ministry of Agriculture.
5. Closure of the session.

Policy session – 16 June 2005

1. Introduction and arrangements for the session.
2. Information on the Master Plan for Fishery Sector Development in Georgia, 2005–2020.
3. Information on the Action Plan for Fishery Sector Management and Development in Georgia, 2005–2008.
4. Information on the Law of Georgia for Fisheries and Aquaculture.
5. Closure of the session.

ANNEX 2

Workshop on Fisheries Management and Development, Batumi, Georgia,19 August 2004

LIST OF PARTICIPANTS

Organization	Representative
Ministry of Agriculture, Achara	Edurad Futkaradze, Minister Raul Gabaidze, Vice-Minister Tengiz Tsivadze, Director, Food and Natural Resources Department
Mebaduri Ltd (cooperative organization), Batumi	Zaur Shervashidze, Director
Achartevzi Ltd, Batumi	Djimsher Tsivadze, Director Guliver Dolidze, Deputy Director
Coastguard	Cap. Koba Bochorishvili, Director Cap. Davit Djebashvili, Second Director
Ministry of Economic Development of Georgia, Department of Statistics	Teimuraz Beridze, Director of Department
Maritime Transport Administration of Georgia	Valeri Khardini, Head, Shipping Safety Department Valeri Imnaishvili, Deputy Head, Shipping Safety Department
Khobi Cooperative Organization,	Murad Miminoshvili, Head of the Organization
Gagra Cooperative Organization,	Givi Darjania, Head of the Organization
Fishers' Association of Poti	Otar Djamburia, President, Aleqsandre Intskirveli, Deputy President
Agriculture Community of the Georgian Parliament	George Kheviashvili, Chairman, Zurab Shkvatsaburia, Vice-Chairman, Valeri Gelbakhiani, Vice-Chairman
Oraguli Centre Ltd	Valeri Dtsuladze, Director
Marine Ecology and Fisheries Research Institute (MEFRI) of the Ministry of Environment Protection and Natural Resources of Georgia	Akaki Komakhidze, Director Revaz Goradze, Director, Aquaculture Division Tatiana Chernova, Fish Disease Expert Maia Shavlakadze, Scientist Davit Bagrationi, Scientist
Ministry of Environment Protection and Natural Resources of Georgia	Marina Khavtasi, Fish Resource Expert

Ministry of Agriculture of Georgia	Nugzar Sardjeveladze, Deputy Minister Mamuka Matiashvili, Senior Lawyer Roman Tsinsadze, Director, Department of Fisheries Ekaterina Davituliani, Fishery Statistician Kote Iashvili, Director, Veterinary Officer Omar Nacvlishvili, Fishery Technologist Khatuna Natsvlishvili, Secretary
FAO/Project TCP/GEO/2904(A)	Mamuka Meskhi, FAO Assistant Representative in Georgia Raymon Van Anrooy, Fishery Officer, FIPP, FAO Zviad Tsertsvadze, National Project Coordinator Maia Metreveli, National Consultant, Fishery Statistics Irakli Kacharava, National Consultant, Fishery Development Andrés Mena Millar, International Consultant, Fishery Development

Workshop on fisheries legislation and management, Tbilisi, Georgia,11 and 18 February 2005

LIST OF PARTICIPANTS

Organization	Representative
Ministry of Agriculture of Georgia	Nugzar Sardjeveladze, Deputy Minister Shota Kikalishvili, Director, Department of Finance Giorgi Sikharulidze, Deputy Director, Department of Food Security Tamaz Tskitishvili, Department of Food Security Giorgi Rusia, Deputy Director, Department of Foreign Affairs Aleko Taniashvili, Deputy Director, Veterinary Department *Department of Fisheries* David Iakobidze, Director, Department Guram Nekerashvili, Senior Fish Marketing Specialist Ekaterine Davituliani, Senior Economist Mikhail Kutaladze, Senior Inland Fisheries Specialist Xatuna Natcvlishvili, Senior Personnel Officer
Ministry of Environment Protection and Natural Resources of Georgia	Ekaterine Ediberidze, Deputy Minister Irakli Macharashvili, Vice-Minister Temur Goderdzishvili, Director, Department of Licences and Permits Tatiana Chernova, MEFRI, Senior Research Officer Maia Shavkulashvili, MEFRI, Research Officer
Ministry of Finance of Georgia	Papuna Petriashvili, Deputy Director, Budget Department
Ministry of the Interior of Georgia	Captain III rank (Colonel) Gela Lomadze Kakha Kereselidze, Assistant Director, Department of Personnel
Ministry of Economic Development of Georgia	Natia Turnava, Deputy Minister
Member of Parliament of Georgia	Roman Melia
Parliamentary Committee on Environment Protection and Natural Resources	Tamaz Khidesheli, Chairman Nana Talakvadze, Director, Personnel
Ministry of Foreign Affairs of Georgia	Davit Aleksidze, Attaché of International Economic Relations
Marine Authority of Georgia	Giorgi Turkadze, Senior Specialist
Other organizations	Tamaz Barabadze, Senior Specialist, State Chancellery, Law Department Mamuka Matiashvili, Senior Lawyer, US Agency for International Development (USAID)

	Archil Farcvania, Union for Restocking and Rehabilitation of Ichthyofauna Ltd Vasil Sabanidze, Senior Fishery Biologist, Georgian Lakes Zviad Kokaia, Specialist, Georgian Lakes Dato Nikolaishvili, Chairman, Poseidoni Marine Association Zurab Savaneli, Senior Specialist, Saqnapirdacva Administration of Geo-information, Mamuka Gvilava, Project Manager, Integrated Coastal Zone Management (ICZM) Abesalom Jalagania, Senior Fishery Biologist, Gejeti Ponds Shukri Kopaliani, Gagra Cooperative Organization Shota Zhvania, Sukhumi Cooperative Organization Murad Miminoshvili, fishing vessel owner Nodar Culaia, fishing vessel owner
FAO/Project TCP/GEO/2904(A)	Mamuka Meskhi, FAO Assistant Representative in Georgia Andrés Mena Millar, International Consultant, Fishery Development Melvin Spreij, International Legal Consultant Anniken Skonhoft, Legal Officer, FAO Zviad Tsertsvadze, National Project Coordinator Maia Metreveli, National Consultant, Fishery Statistics Maia Bitadze, National Legal Consultant Sofia Lejava, Project National Assistant Irakli Todria, Translator/Interpreter

National Conference on Fisheries Management and development, Tbilisi, 15–16 June 2005

LIST OF PARTICIPANTS

Organization	Representative
Ministry of Agriculture of Georgia	Mikhail Svimonishvili, Minister Nugzar Sardjeveladze, Deputy Minister Giorgi Makharashvili, Deputy Minister Mirian Dekanoidze, Deputy Minister Roman Kakulia, Director, Department of Foreign Affairs Giorgi Rusia, Deputy Director, Department of Foreign Affairs Omar Kacharava, Director, Department of Food Safety Zaza Ziraqishvili, Director, Regional Department Nino Toradze, Director, Press Centre Barbare Benashvili, Journalist *Department of Fisheries* David Iakobidze, Director, Giorgi Mikaberidze, Deputy Director Guram Nekerashvili, Senior Fish Marketing Specialist, Ekaterine Davituliani, Senior Economist Mikhail Kutaladze, Senior Inland Fisheries Specialist Kakha Asatiani, Senior Economist Xatuna Natcvlishvili, Senior Personnel Officer Lali Sturua, Senior Technologist Avtandil Dolidze, Senior Specialist, Recreational Fisheries
Ministry of the Interior of Georgia, Department of State Border Defence	General Davit Gulua, Director, Department Captain III rank (Colonel) Gela Lomadze
Ministry of Environment Protection and Natural Resources of Georgia	Givi Titikashvili, Deputy Director, Department of Biodiversity Protection Marina Khavtasi, Senior Specialist Elizbar Makhuashvili, Legislation Specialist
Marine Ecology and Fisheries Research Institute (MEFRI) of Georgia	Tatiana Chernova, Senior Research Officer Maia Shavkulashvili, Research Officer
Maritime Transport Administration of Georgia	Giorgi Turkadze, Senior Specialist
Union for Restocking and Rehabilitation of Ichthyofauna Ltd	Archil Farcvania
Zgvis Nobati Ltd	Ciala Chikovani, Engineer Technologist
Lochini98 Ltd	Mamuka Maqarashvili

Missouri Ltd	Gia Jamberidze, Director
Achartevzi Ltd	Djimsher Tsivadze
Argo Ltd	Omar Nacvlishvili, Director
Farmer	Akaki Kerashvili
Aqva Plus Farm	Zurab Khitarishvili
Embrioni Farm	Abesalom Jalagonia
Fishers' Association of Poti	Nodar Culaia, Deputy Head
Union of Georgian Fishers	Norad Miminoshvili
European Commission Food Security Programme	Jemal Mchedlishvili, Agro-economist/ Budget System Expert
USAID	Rusudan Kacharava, Project Management Specialist, Economic Growth Office
Turkish International Cooperation Agency	Aytekin Ayden, Under Coordinator Irina Javakhidze, Secretary
USAID	Mamuka Matiashvili, Senior Lawyer
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